Pursuant to s. 227.112, Wis. Stats., the Wisconsin Department of Natural Resources is hereby seeking comment on the following proposed guidance document.

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GUIDANCE PURPOSE AND DISCLAIMER

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Appendix 1

TOPICAL LIST OF WATER LAW CASES (2000)

The topical list of water law cases is intended to be a research tool for enforcement personnel and technical staff working on water regulation matters. The cases listed under each topic represent important concepts or current rules of law to be considered when explaining the water regulation program or in enforcement situations.

It is not a definitive compendium of cases or principles. For example, the list of navigability does not include cases on navigability as it relates to mill dams or on navigability determinations for individual lakes or streams.

The topical list includes decisions by the Wisconsin Supreme Court and courts of appeals.

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TOPICS FOR LISTING OF WATER LAW CASES
ACCRETION AND RELICCTION

**Doemel v. Jantz**, 180 Wis. 225 (1923)

The rights of riparian owners must be condemned. Such riparian rights include the right to build piers and walls to prevent erosion as well as the right to accretions and relictions; trust doctrine; public rights to high and low water line; the public cannot trespass on land between high and low water line when the water level is down.

**Jansky v. Two Rivers**, 227 Wis. 228 (1938)

Rights of riparian owner on Lake Michigan where there had been accretion and reliction.

**Rondesvedt v. Running**, 19 Wis.2d 614 (1963)

Alluvion formed by accretion belongs to owner of the upland to which it is contiguous, but the riparian right to access to water and circumstances change this rule so that land in front of land goes to owner so access can be maintained.
De Simone v. Kramer, 77 Wis.2d 188 (1977)
   Riparian owner obtains right and title to soil formed by accretions and relictions exclusive as to all the world, except where rights conflict with rights of public for navigation purposes. Accretion is the increase in land caused by the gradual deposit by water of materials on the shores, which deposit replaces the water at this location with dry land.

   The prevailing doctrine that the causing or hastening of gradual deposits by artificial constructions, made by persons other than the benefited and claiming owner, does not prevent the doctrine of accretion from applying. When new formations of land are created by actions of the riparian owner, then the accretion doctrine does not apply.

W.H. Pugh Coal Co. v. State, 105 Wis.2d 123 (Ct.App. 1981)
   The right of a riparian owner to accretions upon his land is absolute as against all the world except to the public's rights of navigation.

   A riparian owner can obtain right and title to land formed by artificial accretion. However, a riparian owner is not allowed to take title to land accretion which was induced by his/her own actions. The fact that the State holds a lake bed in public trust is not sufficient to grant it title to accretions on a riparian owner's land without just compensation.

State v. Trudeau, 139 Wis.2d 91 (1987)
   The doctrines of accretion and reliction apply only to land above the OHWM. They do not apply to land which was submerged by lake waters when those waters reached the elevation of the lake's OHWM.

AEASTHETICS/SCENIC BEAUTY

Muench v. Public Service Commission, 261 Wis. 492 (1952)
   The public right to enjoy natural scenic beauty is firmly established. Under the public trust doctrine, the Department has the duty to protect this public right.

Clafin v. DNR, 58 Wis.2d 182 (1973)
   Potential damage to scenic beauty is a proper basis for the denial of a sec. 30.12, Wis. Stats., structure permit.

Village of Menomonee Falls v. DNR, 140 Wis.2d 579 (1987)
   Despite their subjective nature, aesthetics and scenic beauty are proper factors to be considered in the determination of whether permits for a particular project should be granted.

   The enjoyment of scenic beauty is one of the paramount interests appurtenant to navigable waters. A conclusory statement that a project will have a negative effect on aesthetics is not sufficient. Substantial evidence must support such a finding.

BED OWNERSHIP

McLennan v. Prentice, 85 Wis. 427 (1893)
   Question of ownership of submerged land in Ashland Bay.

Mendota Club v. Anderson, 101 Wis. 479 (1899)
Question was as to status of a certain area on the north end of Lake Mendota. The building of the Farwell Dam in 1850 raised the level of water in the lake some 4 feet giving rise to the question of whether the area was navigable water and of ownership to its bottom, as contrasted to rights claimed through a tax deed allegedly conveying the area. Discusses trust doctrine and also status of artificial condition created by dam.

**State v. Bleck**, 114 Wis.2d 454 (1983)

*If a lake is navigable and natural, private individuals cannot gain title to the lake bed and an individual who is not a riparian owner cannot place a structure on the bed. However, the DNR does not have jurisdiction if a waterway is artificially created on private land. An artificial and private lake is an exception to the general rule that waters which are navigable in fact are navigable and public. Anyone who objects to the state's jurisdiction under §30.12 and §30.15, Stats., on the basis that the body of water over which the state is asserting jurisdiction is an artificial water created on private land has the burden of persuasion on that fact by a preponderance of the evidence.*

**State v. Trudeau**, 139 Wis.2d 91 (1987)

*The state holds title to the beds of lakes up to the OHWM. An area need not be navigable to be state-owned lake bed. If the land is part of the navigable lake, then the fact that the specific area cannot be navigated is irrelevant. The erection of an artificial barrier between a lake and a project site does not remove the site as part of the lake. So long as lake water would naturally flow to and from the site in the absence of the barrier, the site is part of the lake.*

*A county board of adjustment does not have the authority to grant variances for any part of project site below the OHWM.*

**Klingeisen v. DNR**, 163 Wis.2d 921 (1991)

*If an artificial channel is navigable and public, the DNR has jurisdiction to regulate boathouses on it even though the bed is privately owned. Title to the bed of navigable channels is subordinate to the rights of the state to preserve to the people the full enjoyment of navigation and the rights incident thereto.*

**BOATHOUSES**

**Claflin v. State Department of Natural Resources**, 58 Wis.2d 182 (1973)

*Determination that specific structure is detrimental to public interest on grounds that it impairs natural beauty of lake is proper basis for denial of a permit for the structure. The natural beauty of our northern lakes is one of the most precious heritages Wisconsin citizens enjoy. It is entirely proper that the natural beauty should be protected against specific structures that may be found to mar that beauty.*

**Klingeisen v. DNR**, 163 Wis.2d 921 (1991)

*The DNR has jurisdiction to regulate boathouses located on artificial, navigable channels when those channels are connected to natural, navigable bodies of water.*

**CHANNEL CHANGES**

**Lathrop v. Racine**, 119 Wis. 461 (1903)

*Improvement of harbor. Status of artificial channel, straightening out natural river.*
CRANBERRY BOGS
Cranberry Creek D. D. v. Elm Lake C. Co., 170 Wis. 362 (1920)
Cranberry growers have right to divert natural watercourse

State v. Zawistowski, 95 Wis.2d 250 (1980)
Section 94.26, Stats., exempts cranberry growers from getting s. 30.18 permit. Use of water is limited by the common law reasonable use doctrine.

Tenpas v. DNR, 148 Wis.2d 579 (1989)
Secs. 710.11 and 31.14 do not apply to cranberry growers. Both laws conflict with the rights granted to cranberry growers under sec. 94.26. Furthermore, the legislative history of sec. 31.14 indicates that it was intended to apply only to power dams, not cranberry dams.

CUMULATIVE AND SECONDARY IMPACTS
Hixon v. Public Service Commission, 32 Wis.2d 608 (1966)
In this case, the Court stressed the importance of taking the cumulative impacts of a structure/project into consideration. In holding that the Commission's denial to Hixon of a structure permit was not arbitrary or capricious, the Court stated,
"There are over 9,000 navigable lakes in Wisconsin covering an area of over 54,000 square miles. A little fill here and there may seem to be nothing to become excited about. But one fill, though comparatively inconsequential may lead to another, and another, and before long a great body of water may be eaten away until it may no longer exist." Id. 631-632.

Wis. Environmental Decade v. DNR, 115 Wis.2d 381 (1983)
In this case, the Court determined that the DNR need not consider the secondary socio-economic effects of a project in deciding whether to prepare an EIS. That is, WEPA does not require the DNR to prepare an EIS for a project when investigation and research indicate that the project will have minor impacts on the environment, but will have possible socio-economic impacts. State agencies must look for significant effects on the physical environment in deciding whether to prepare an EIS. In the absence of significant impacts on the environment, socio-economic impacts do not trigger the EIS requirement. The public trust doctrine is not to be "expanded to cover...downtown preservation."

Sterlingworth Condominium Assoc. v DNR, 205 Wis 2d. 702(Ct. App., 1996)
This case deals with the cumulative impacts of piers, boats and other riparian impacts on the shores of navigable waters. It updates Hixon and provides excellent language on cumulative impacts: "Whether it is one, nine or ninety boat slips, each slip allows one more boat which inevitably risks further damage to the environment and impairs the public's interest in the lakes....In our opinion, the DNR, in limiting Sterlingworth's permit...carried out its assigned duty as protector of the overall public interest in maintaining one of Wisconsin's most important natural resources."

DAMS
(See also MILL DAMS)
Baraboo v. Railroad Commission, 195 Wis. 523 (1928)
Who may authorize dams. Regulation by state.

New Lisbon v. Harebo, 224 Wis. 66 (1937)
Sec. 31.06; city must acquire PSC permit to construct a dam before condemnation proceedings.
State ex rel. Priegel v. Northern States Power Co., 242 Wis. 345 (1943)
25% of natural flow must pass through a dam to protect lower riparian owners. A dam = mill race, canal, pond.

Jones v. Wisconsin Michigan Power Co., 252 Wis. 280 (1948)
Defendant's right to lower water and interpretation of dam maintenance.

Muench v. PSC, 261 Wis. 492 (1952)
Trust doctrine extends to land only as long as it remains under navigable water. "Navigable in fact". PSC considers fishing, scenic beauty, boating, hunting as public rights in authorizing dam.

The existing "County Board Law" section of a state statute was held unconstitutional because it permitted the public right to enjoyment of fishing, hunting or natural scenic beauty in a navigable stream to be seriously impaired or destroyed through action of a county board. Such delegation of power by the Legislature, involving a complete abdication of the trust, is void.

Further; (1) Public Service Commission decisions are reviewable in court. (2) Any citizen of the state, even through not a riparian owner and living considerable distance from the waters concerned, can bring action as an aggrieved and directly affected party. (3) It is the duty of the state through its Conservation Commission to appear in behalf of the public before the Public Service Commission in their judicial capacity in such cases. (4) The Public Service Commission will be required to weigh public rights for recreational enjoyment of a stream against the public benefits which would result from the construction of a dam. (5) The right of the citizens of the state to enjoy our navigable streams for recreational purposes, including the enjoyment of a scenic beauty, is a legal right that is entitled to all the protection which is given to financial rights.

Daly v. Natural Resources Board, 60 Wis.2d 208, Certiorari denied 94 S. St. 883, 414 U.S. 1137, 38 L. Ed. 2d 763 (1973)
There was substantial evidence in record to support DNR's issuance of dam permit.

Tenpas v. DNR, 148 Wis.2d 579 (1989)
Secs. 710.11 and 31.14 do not apply to cranberry growers. Both laws conflict with the rights granted to cranberry growers under sec. 94.26. The legislative history of sec. 31.14 indicates that it was intended to apply only to power dams, not cranberry dams.

DIVERSIONS
Nekoosa-Edwards Paper Co. v. PSC, 8 Wis.2d 582 (1959)
PSC has no jurisdiction under sec. 31.14 to determine whether the diversion of nonsurplus water will damage riparian owners in deciding whether to grant a permit to divert waters. If the diversion will take nonsurplus water, any diversion as a matter of law will injure riparian owners, and so their consent must be obtained.

State ex rel. Chain O' Lakes P. Asso. v. Moses, 53 Wis.2d 579 (1972)
Diversion of waters.

The established rule of the common law in Wisconsin was that every riparian owner of stream or lakeshore property has an equal right to the use of its water for all reasonable and beneficial purposes. However, s. 30.18, Stats., in derogation of common law makes it unlawful for any person to divert water without a permit from the Department of Natural Resources if the use or diversion thereof falls into one of the three categories listed in the statutes.
A s. 30.18 permit only need be obtained if the intended use of the diverted waters falls within the three categories, (1) agriculture, (2) irrigation, (3) and the bringing back or maintaining of a normal water level in stream or lake.

**Omernik v. State**, 64 Wis.2d 6 (1974)
Unlawful diversion of water from stream and creek. Section 30.18, Stats., requires that a permit be obtained before water can be diverted for irrigation purposes whether the water is surplus or nonsurplus. The fact that a stream is navigable or nonnavigable is of no consequence since the statutory prohibition of s. 30.18, Stats., applies to diversions from nonnavigable as well as from navigable streams.

**Omernick v. Department of Natural Resources**, 71 Wis.2d 370 (1975)
Recognized that s. 30.18, Stats., introduces element of prior appropriation into state water law.

**State v. Zawistowski**, 95 Wis.2d 250 (1980)
Section 94.26, Stats., exempts cranberry growers from getting s. 30.18 permit. Use of water is limited by the common law reasonable use doctrine.

**DRAINAGE**

**Nicolai v. Wilkins**, 104 Wis. 580 (1899)
Landowner can't collect and discharge water on land of neighbor.

**Priewe v. Wis. S. L. & Imp. Co.**, 103 Wis. 537 (1899)
Held that a legislatively-authorized scheme to drain Muskego Lake purportedly under ch. 169, Laws of 1887, ch. 202, Laws of 1891, was invalid as a violation of the constitution. Discusses trust doctrine - legislature can't free itself of the trust.

**McEvoy v. Gallagher**, 107 Wis. 486 (1900)
Surface water. Right to drainage created by prescription.

**In re Dancy Drainage District**, 129 Wis. 129 (1906)
Impairment of navigable waters. Drainage district refused power to drain a lake.

**In re Horicon Drainage District**, 136 Wis. 227 (1908)
Impairment of navigable waters. Who has title to bed of navigable water created by artificial condition.

**Merwin v. Houghton**, 146 Wis. 398 (1911)
Riparian rights can be condemned for drainage - a public purpose; drainage commissioners may change channel of navigable stream if it will improve navigability; diversion of river through nearby marshlands; trust doctrine. Two justices say public right of fishing subject to paramount right to improve navigation.

**Cranberry Creek D. D. v. Elm Lake C. Co.**, 170 Wis. 362 (1920)
Right to divert natural watercourse by cranberry growers.

**Dargert v. Dietrich**, 171 Wis. 584 (1920)
Collection of damage caused by failure to clean out drainage ditch.

**In re Crawford County Levee and Drainage District**, 182 Wis. 404 (1924)
Discusses trust doctrine, state can't destroy navigable waters.
C. B. & Q. R. R. Co. v. Railroad Commission, 199 Wis. 342 (1929)
   Drainage has to be provided for, but does not have to follow natural pattern.

Delta Fish & Fur Farms v. Pierce, 203 Wis. 519 (1931)
   Judgement in drainage district proceedings as establishing status of water as nonnavigable waters.

Henry v. C. B. & Q R. Co., 204 Wis. 182 (1931)
   Action for damages due to flooding of crops. Allegedly due to railroad embankment and inadequate bridge.

Thurs Box Co. v. Marathon Co., 233 Wis. 387 (1940)
   Sec. 88.38 (1938); highway cannot obstruct surface drainage.

In re Jefferson Co. Farm Drainage, 264 Wis. 339 (1953)
   Not proper to form drainage district on piecemeal basis.

Lloyd v. Chippewa Co., 265 Wis. 293 (1953)
   County not required to provide drainage to private property where easement for highway drainage has been granted.

Tiedeman v. Middleton, 25 Wis.2d 443 (1964)
   City has right to channel surface water in natural direction, if no new watershed is tapped and volume of water is not increased. Prescriptive and artificial conditions discussed.

State v. Deetz, 66 Wis.2d 1 (1974)
   The Court overrules the common enemy doctrine and adopts the "reasonable use" rule. Under the reasonable use rule, a landowner is liable for damages caused by his/her diversion of surface waters if that diversion unreasonably interferes with another's use or enjoyment of land.

   The operation of a drainage ditch is not an agricultural practice within the meaning of sec. 814.04(9) and sec. 823.08(4), Wis. Stats.

DREDGING

Angelo v. Railroad Commission, 194 Wis. 543 (1928)
   Contracts for taking material from bed of navigable lakes. Discusses title to bed, state has proprietary interest in minerals or other materials in beds of navigable lakes; dredging statute is constitutional.

Reuter v. Department of Natural Resource, 43 Wis.2d 272 (1969)
   Requires the Department of Natural Resources, as a prerequisite to issuing a dredging permit under s. 30.20(2)(c), Stats., to make a specific finding of fact as to effect on water quality and increases of water pollution which the granting of a permit might engender.

   As to lakes and streams of the state, the term "public interest" clearly involved the use by the public for all the incidents of navigation, i.e., sailing, rowing, canoeing, bathing, fishing, hunting, skating, and other public purposes - most, if not all of which are rendered less useful or otherwise adversely affected by polluted waters.

State v. Dwyer, 91 Wis.2d 440 (1979)
Section 30.20, Stats., applies to all streams. Section 88.90(3) does not supersede requirement to get s. 30.20 permit.

R.W. Docks & Slips v. DNR, 145 Wis.2d 854 (Ct.App. 1988)
Sec. 30.19, Stats., deals only with the dredging of artificial waterways, not natural bodies of water.

ENLARGEMENTS
Pewaukee v. Savoy, 103 Wis. 217 (1899)
This was an appeal from a judgment restraining defendants from placing a fence along street line to prevent frontage to Pewaukee Lake. The natural shoreline did not reach the limit or the street, but an artificial line maintained more than 20 years brought the water level to the street limit. Case discusses trust doctrine. Holds artificial condition had legally become its natural condition by existence of new level for more than 20 years and, as regarding the submerged lands, are characteristics of a natural lake to that extent. Dedication by riparian owners conclusively presumed where it exists for 20 years. Status of streets terminating on navigable water.

Haase v. Kingston Co-op Creamery Assn, 212 Wis. 585 (1933)
Public use of navigable artificial waters can legally become a natural condition.

Klingseisen v. DNR, 163 Wis.2d 921 (1991)
If the volume or expanse of a navigable body of water is increased artificially, the public right to use the water is increased correspondingly.

The Court held that an artificial channel was navigable and public because it was an expansion of Lake Michigan's Green Bay and could not exist on its own.

FENCES
Mendota Club v. Anderson, 101 Wis. 479 (1899)
Question was as to status of a certain area on the north end of Lake Mendota. The building of the Farwell Dam in 1850 raised the level of water in the lake some 4 feet, giving rise to the question of whether the area was navigable water and of ownership to its bed, as contrasted to rights claimed through a tax deed allegedly conveying the area. Discusses trust doctrine and also status of artificial condition created by dam.

Pewaukee v. Savoy, 103 Wis. 271 (1899)
This was an appeal from a judgment restraining defendants from placing a fence along street line to prevent frontage therefrom to Pewaukee Lake. The natural shoreline did not reach the limit or the street, but an artificial line maintained more than 20 years brought the water level to the street limit. Case discusses trust doctrine. Holds artificial condition had legally become its natural condition by existence of new level for more than 20 years and, as regarding the submerged lands, are characteristics of a natural lake to that extent. Dedication by riparian owners conclusively presumed where it exists for 20 years. Status of streets terminating on navigable water.

Doemel v. Jantz, 180 Wis. 225 (1923)
The rights of a riparian owner must be condemned. Such riparian rights include the right to build piers and walls to prevent erosion as well as the right to accretions and relictions; trust doctrine; public rights to high and low water line; the public cannot trespass on land between the high and low water lines when the water level is low.
FLOATING BOGS

Extension of lake being caused by a dam. Status of waters created by artificial means and title to land beneath water. Definition of "avulsion". Rights of riparian owner and right to encroach on bed. Public right of recreation. "Floating bog" defined.

State v. Lamping, 36 Wis.2d 328 (1967)
Floating bog defined. A material factor to be considered in determining whether a peninsula such as that involved in the instant case is a floating bog on land is the degree to which it is anchored or fastened to the underlying lake bed; if it is so securely anchored or fastened thereto that its surface does not rise or fall with the raising or lowering of the lake's water level, it would no longer constitute a floating bog.

FLOODPLAIN/SHORELAND ZONING

Just v. Marinette County, 56 Wis.2d 7 (1972)
The exercise of police power in zoning must be reasonable. It is reasonable to exercise police power to prevent harm to public rights by limiting the use of private property to its natural uses. The shoreland zoning ordinance at issue in this case was held to not be a compensable taking because it preserved nature and natural resources as they were created and to which the public had a present right.

"The active public trust duty of the state of Wisconsin in respect to navigable waters requires the state not only to promote navigation but also to protect and preserve those waters for fishing, recreation, and scenic beauty. To further this duty, the legislature may delegate authority to local units of government, which the state did by requiring counties to pass shoreland zoning ordinances."

"Lands adjacent to or near navigable waters exist in a special relationship to the state. They ... are subject to the state public trust powers."

"The state of Wisconsin under the trust doctrine has a duty to eradicate the present pollution and to prevent further pollution in its navigable waters. This is not, in a legal sense, a gain or a securing of a benefit by the maintaining of the natural status quo of the environment." Therefore, the shoreland zoning ordinance did not create a public benefit and could not be held to result in a compensable taking.

State v. Trudeau, 139 Wis.2d 91 (1987)
Under sec. 87.30(2), Stats., the State has a cause of action to enjoin a public nuisance whenever there exists a violation of any local floodplain zoning ordinance.

M & I Marshall Bank v. Town of Somers, 141 Wis.2d 271 (1987)
Primary authority to enact, repeal and amend a zoning ordinance was intended to be, and is, vested at the county level. Therefore, the county was the proper party against whom a takings claim was to be made, not the town.

Reaffirms Just and extends it by stating that a parcel of land which consists of continuing wetland which is partly within and partly outside a shoreland area should be treated as if the entire wetland was located within the shoreland area.

State v. Ozaukee Board of Adjustment, 152 Wis.2d 552 (Ct.App. 1989)
Floodplain zoning is a necessary tool to protect human life and health and to minimize property damages and economic losses. The legislature may assign public trust duties to local units of government which the state did by requiring counties to pass shoreland ordinances.

Ozaukee Board of Adjustment acted outside its jurisdiction in granting the 4 variances for a restaurant/shopping complex within a designated floodplain area.

**INCIDENTS OF NAVIGATION**

**Olson v. Merrill, 42 Wis. 203 (1877)**
A stream that is navigable at recurring times is navigable.

**Ne-pee-nauk Club v. Wilson, 96 Wis. 290 (1897)**
Right to hunt on Mud Lake. Who may hunt or fish thereon. Defines difference between lake and stream. The Court recognized that the body of water in question could properly be called a swamp or marsh because much of the water disappeared in the summer, leaving large expanses of mud, bog and thick vegetation. However, the Court still declared it to be a navigable lake.

**Willow River Club v. Wade, 100 Wis. 86 (1898)**
Stream bed title in riparian owner; right to fish is a public right. Question was as to right to take fish from Willow River; discusses ownership of bed of stream and trust doctrine. What is navigable water. Distinctions between navigable water of United States as contrasted to state. Who owns fish in water. Riparian owners can't prevent fishing in navigable waters.

**Diana Shooting Club v. Husting, 156 Wis. 261 (1914)**
Trust doctrine includes right to hunt. The Court defines the ordinary highwater mark as: "...the point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation, or other easily recognized characteristic."

**Nekoosa-Edwards Paper Co. v. Railroad Commission, 201 Wis. 40 (1930)**
Order of PSC denying permit for dam in Four Mile Creek. Discusses history of water law. What is "navigable water". Rights of riparians on navigable streams.

**Baker v. Voss, 217 Wis. 415 (1935)**
Title to bed of both meandered and nonmeandered lakes is in state.

**Munninghoff v. Wisconsin Conservation Commission, 255 Wis. 252 (1949)**
Authority of commission to issue licenses for privately owned land under navigable water; trust doctrine; riparian rights; whether stream is navigable or not; trapping not an incident to navigation and so no public right to trap; right of navigation includes incidental use of bottom.

**Muench v. PSC, 261 Wis. 492 (1952)**
Trust doctrine extends to land only as long as it remains under navigable water. "Navigable in fact". PSC considers fishing, scenic beauty, boating, hunting as public rights in authorizing dam.

The existing "County Board Law" section of a state statute was held unconstitutional because it permitted the public right to enjoyment of fishing, hunting or natural scenic beauty in a navigable stream to be seriously impaired or destroyed through action of a county board. Such delegation of power by the Legislature, involving a complete abdication of the trust, is void.
Further; (1) Public Service Commission decisions are reviewable in court. (2) Any citizen of the state, even though not a riparian owner and living considerable distance from the waters concerned, can bring action as an aggrieved and directly affected party. (3) It is the duty of the state through its Conservation Commission to appear in behalf of the public before the Public Service Commission in their judicial capacity in such cases. (4) The Public Service Commission will be required to weigh public rights for recreational enjoyment of a stream against the public benefits which would result from the construction of a dam. (5) The right of the citizens of the state to enjoy our navigable streams for recreational purposes, including the enjoyment of scenic beauty, is a legal right that is entitled to all the protection which is given to financial rights.

**LAKES**

**Ne-pee-nauk Club v. Wilson,** 96 Wis. 290 (1897)

The Court discusses the distinction between a lake and a watercourse or stream. A stream or watercourse has natural motion (i.e., a current). On the other hand, in its natural state the water of a lake is substantially at rest. This distinction between lakes and streams is entirely irrespective of the size of the body of water.

The Court recognized that the body of water in question could properly be called a swamp or marsh because much of the water disappeared in the summer, leaving large expanses of mud, bog and thick vegetation. However, the Court still declared it to be a navigable lake.

**Illinois Steel Co. v. Bilot,** 109 Wis. 418 (1901)

A swampy area is declared by the Court to be a navigable lake. "The mere fact that the water was very shallow, so that marsh grass appeared above the surface, that it was called a marsh, and that the water was not deep enough to admit of navigation, or that the surface was not at all times wholly submerged, does not preclude its being in fact a lake."

**Baker v. Voss,** 217 Wis. 415 (1935)

A lake is navigable that is a shallow, muddy lake or marsh, if boats may be used thereon.

**State v. Trudeau,** 139 Wis. 2d 91 (1987)

An area need not be navigable to be lake bed. If land is part of a navigable lake, then the fact that the specific area cannot be navigated is irrelevant.

**LEVELS AND FLOWS**

**Smith v. Youmans,** 96 Wis. 103 (1897)

Action to restrain mill dam owner at outlet of Lake Beulah from taking action which would reduce level of lake. After 20 years, an artificial condition becomes a natural condition.

**Flambeau River Lbr. Co. v. Railroad Commission,** 204 Wis. 524 (1931)

Validity of order of PSC authorizing Flambeau R. L. Co. to release all flow in Flambeau except 150 c.f.s. when logs were being driven on the river. Important case. Describes history of water law. Court can't substitute judgment for PSC.

**Trout Brook Co. v. Willow River P. Co.,** 221 Wis. 616 (1936)

Duty of dam owner to operate dam so upper and lower riparians are not injured. Dam need only be constructed for normal floods.
State ex rel. Priegel v. Northern States Power Co., 242 Wis. 345 (1943)
  25% of natural flow must pass through a dam to protect lower riparian owners. A dam = mill race, canal, pond.

Wisconsin Power and Light Company v. PSC, 5 Wis.2d 167 (1958)
  Setting of level is not a taking and is a proper exercise of police power. Sec. 31.02 applies to dams maintained before and after enactment.

The provision of 31.34 that at least 25% of natural flow must be passed by a dam only sets a minimum, not a standard.

DNR v. Clintonville, 53 Wis.2d 1 (1971)
  Violation of s. 31.02 does not establish cause of action for damages under s. 29.65.

Otte v. DNR, 142 Wis.2d 222 (Ct.App. 1987)
  Under sec. 32.01(1) Stats, the DNR has the power to regulate water levels. However, this section does not authorize the DNR to order a riparian landowner to restore a filled ditch at his own expense. Such an order was a compensable taking.

MILL DAMS

Newcomb v. Smith, 2 Pinney 131 (1849)
  Constitutionality of Mill dam Act of 1840. The act was found to be constitutional. Also a discussion of due process and taking.

Thien v. Voegtlander, 3 Wis. 411 (1854) Pratt v. Brown, 3 Wis. 532 (1854)
  Constitutionality of Mill Dam Act. A mill dam can only be constructed if compensation is paid.

  Court states that if it were not for precedent and for economical benefits, it would overrule the Mill Dam Act. Holds that the Mill Dam Act is constitutional.

McDonald v. Apple River Power Co., 164 Wis. 450 (1916)
  What is "navigable river" under Mill Dam Law.

Nekoosa-Edwards Paper Co. v. Railroad Commission, 201 Wis. 40 (1930)
  Order of PSC denying permit for dam in Four Mile Creek. Discusses history of water law. What is "navigable water". Rights of riparians on navigable streams.

Haase v. Kingston Co-op Creamery Assn, 212 Wis. 585 (1933)
  Public use of navigable artificial waters can legally become a natural condition.

Burkman v. New Lisbon, 246 Wis. 547 (1944)
  Prescriptive right to flow can be abandoned by non-use. Prescriptive use for mill dam cannot be extended to maintenance of flowage for park.

Muench v. PSC, 261 Wis. 492 (1952)
  Trust doctrine extends to land only as long as it remains under navigable water. "Navigable in fact". PSC considers fishing, scenic beauty, boating, hunting as public rights in authorizing dam.
The existing "County Board Law" section of a state statute was held unconstitutional because it permitted the public right to enjoyment of fishing, hunting or natural scenic beauty in a navigable stream to be seriously impaired or destroyed through action of a county board. Such delegation of power by the Legislature, involving a complete abdication of the trust, is void.

Further; (1) Public Service Commission decisions are reviewable in court. (2) Any citizen of the state, even though not a riparian owner and living considerable distance from the waters concerned, can bring action as an aggrieved and directly affected party. (3) It is the duty of the state through its Conservation Commission to appear in behalf of the public before the Public Service Commission in their judicial capacity in such cases. (4) The Public Service Commission will be required to weigh public rights for recreational enjoyment of a stream against the public benefits which would result from the construction of a dam. (5) The right of the citizens of the state to enjoy our navigable streams for recreational purposes, including the enjoyment of scenic beauty, is a legal right that is entitled to all the protection which is given to financial rights.

**NAVIGABILITY**

**Olson v. Merrill**, 42 Wis. 203 (1877)
A stream that is navigable at recurring times is navigable.

**Diedrich v. Northwestern U.R. Co.**, 42 Wis. 248 (1877)
Rights of riparian on Lake Michigan. Waters are navigable when capable of navigation in fact without other conditions.

**Muench v. PSC**, 261 Wis. 492 (1952)
Trust doctrine extends to land only as long as it remains under navigable water. "Navigable in fact". PSC considers fishing, scenic beauty, boating, hunting as public rights in authorizing dam.

The Court delineated a new test for determining whether waters are "navigable in fact." It stated: "It is no longer necessary in determining navigability of streams to establish a past history of floating logs, or other use of commercial transportation, because any stream is *navigable in fact* which is capable of floating any boat, skiff, or canoe, of the shallowest draft used for recreational purposes."

The existing "County Board Law" section of a state statute was held unconstitutional because it permitted the public right to enjoyment of fishing, hunting or natural scenic beauty in a navigable stream to be seriously impaired or destroyed through action of a county board. Such delegation of power by the Legislature, involving a complete abdication of the trust, is void.

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**DeGayner & Co., Inc. v. Department of Natural Resources**, 70 Wis.2d 936, 236 N.W.2d 217 (1975)
A stream is navigable if it is navigable in fact at recurring times each year long enough to make the stream useful as a highway.
"...the test [for navigability] is whether the stream has periods of navigable capacity which ordinarily recur from year to year, e.g., spring freshets, or has continued navigable long enough to make it useful as a highway for recreation or commerce. The test is not whether the stream is navigable in a normal or natural condition, but whether it is in some sense permanently navigable, i.e., regularly recurring or of a duration sufficient to make it conducive to recreational uses."

Existence of beaver dams on a stream for 37 years is a natural condition.

State v. Bleck, 114 Wis.2d 454 (1983)
State had jurisdiction under Secs. 30.12 and 30.15 because Bass Lake was navigable in fact. "Navigable waters" for the purpose of establishing jurisdiction under Chapter 30 are waters that are navigable in fact.

State v. Trudeau, 139 Wis.2d 91 (1987)
The State holds title to the beds of lakes up to the OHWM. An area need not be navigable to be lake bed. If land is part of a navigable lake, then the fact that the specific area cannot be navigated is irrelevant.

Village of Menomonee Falls v. DNR, 140 Wis.2d 579 (1987)
Navigability in fact is the sole test of navigability for purposes of Chapter 30. The balancing of public interests against the benefits to be gained from the propose project occurs after a determination of navigability and pertains to the determination of whether to grant a permit for the project.

Examiner's conclusion that Lily Creek was navigable in fact was supported by substantial evidence (an experienced DNR water management specialist had navigated a canoe on the creek, a 12-year resident on creek stated that he had seen canoes on it, etc.).

Klingeisen v. DNR, 163 Wis.2d 921 (1991)
The DNR has jurisdiction over a waterway if it is navigable and public. The DNR does not have jurisdiction if the waterway is artificially created on private land.

An artificial channel which is connected to a natural and navigable body of water is public because it cannot exist on its own. If the volume or expanse of navigable water is increased artificially, the public right to use the water is increased correspondingly.

While sec. 30.10 specifically declares some waters navigable, it does not prevent other waters from being declared navigable as well. Once a body of water is found public and navigable, the DNR has jurisdiction.

Turkow v. DNR, 216 Wis. 2d 273(1998)
The DNR has the "authority, as well as the obligation, to determine whether the waters of the state are navigable in fact and therefore subject to regulation. Where the PSC had made a determination historically that this stream was not navigable, it was not "estopped"(legally precluded) from reviewing that determination to make a contemporary jurisdical determination.

**NUISANCE**
State v. Trudeau, 139 Wis.2d 91 (1987)
Under §87.30(2), Stats., the State has a cause of action to enjoin a public nuisance whenever there exists a violation of any local floodplain zoning ordinance.
OBSTRUCTIONS
Mohr v. Gault, 10 Wis. 455 (1860)
Outlet of lake obstructed by natural causes. Remedy of flooded owner is to remove the obstruction. A natural obstruction in stream is not a nuisance.

Enos v. Hamilton, 24 Wis. 658 (1869)
Boom Company cannot wrongfully obstruct navigation. Legislature can authorize blockade of navigable stream by a boom.

Chapin v. Crusen, 31 Wis. 209 (1872)
Ferry franchise held not to interfere with free navigation in Wisconsin River.

Gates v. No. Pac. RR Co, 64 Wis. 64 (1885)
Railroad bridge obstructing navigation.

Union Mill Co. v. Shores, 66 Wis. 476 (1886)
Boom in Lake Superior as nuisance obstructing navigation. Difference between boom in lake and river. They are favored in rivers.

Edwards v. Wausau Boom Co., 67 Wis. 463 (1886)
Boom in part of river nonnavigable in fact except for running logs is proper if done in accordance with charter and is reasonable.

J. S. Keator Lumber Co. v. St. Croix Boom Crop., 72 Wis. 62 (1888)
Right of state to authorize construction of booms in navigable river (St. Croix) even though navigation by watercraft will be impaired. Effect of ordinance of 1787. Also discusses bridge cases. Extensive discussion of concurrent jurisdiction.

Velte v. U.S., 76 Wis. 278 (1890)
Who is responsible for flooding caused by third person placing obstructions without authority on U.S. dam.

Sebranke v. Kohlmeyer, 130 Wis. 352 (1907)
Obstructions in mill pond.

Flambeau R. L. Co. v. Lake Superior D. P. Co., 200 Wis. 31 (1929)
Action for damages for obstruction of navigable stream by a dam.

Muench v. PSC, 261 Wis. 492 (1952)
Trust doctrine extends to land only as long as it remains under navigable water. "Navigable in fact". PSC considers fishing, scenic beauty, boating, and hunting as public rights in authorizing dam.

The existing "County Board Law" section of a state statute was held unconstitutional because it permitted the public right to enjoyment of fishing, hunting or natural scenic beauty in a navigable stream to be seriously impaired or destroyed through action of a county board. Such delegation of power by the Legislature, involving a complete abdication of the trust, is void.

Further; (1) Public Service Commission decisions are reviewable in court. (2) Any citizen of the state, even though not a riparian owner and living considerable distance from the waters concerned, can bring action as an aggrieved and directly affected party. (3) It is the duty of the state through its Conservation Commission to appear in behalf of the public before the Public Service Commission in their judicial
capacity in such cases. (4) The Public Service Commission will be required to weigh public rights for recreational enjoyment of a stream against the public benefits which would result from the construction of a dam. (5) The right of the citizens of the state to enjoy our navigable streams for recreational purposes, including the enjoyment of scenic beauty, is a legal right that is entitled to all the protection which is given to financial rights.

State v. Sensenbrenner, 262 Wis. 118 (1952)
Riparian owners may deny WCD permission to cross their land to remove beaver dam, but WCD may approach dam from the stream itself; obstruction in navigable stream is a nuisance; riparian and public rights in stream bed.

Capt. Soma Boat Line, Inc. v. City of Wisconsin Dells, 56 Wis.2d 838 (1973)
State has power to prohibit erection of or maintenance of any dam, bridge or other structure within or over any navigable stream which may obstruct or impede the free navigation thereof.

Section 31.23 or 31.25 does not provide remedy for a private individual.

Capt. Soma Boat Line v. Wisconsin Dells, 79 Wis.2d 10 (1977)
Reasonable obstructions to navigation are permitted. Whether obstruction to navigation is unreasonable depends upon facts and circumstances of each case, including whether complainants knew of limitations imposed by the obstruction to navigation before they purchased riparian property.

ORDINARY HIGHWATER MARK

Diana Shooting Club v. Husting, 156 Wis. 261 (1914)
The public rights in navigable waters includes the right to hunt; the trust doctrine extends to the protection of this right.

Ordinary highwater mark defined: "By ordinary high-water mark is meant the point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation, or other easily recognized characteristic. And where the bank or shore at any particular place is of such a character that it is impossible or difficult to ascertain where the point of ordinary high-water mark is, recourse may be had to other places on the bank or shore of the same stream or lake to determine whether a given stage of water is above or below ordinary high-water mark."

Polebitzke v. John Week Lbr. Co., 163 Wis. 322 (1916)
Restates the Diana Shooting Club definition of the ordinary highwater mark.

State v. McDonald Lumber Co., Inc., 18 Wis.2d 173 (1962)
Questions as to quantum of proof required to show ordinary highwater mark for purposes of showing trespass on bed of lake by defendant's dock and slip.

An erroneous OHWM determination by the DNR which resulted in a riparian's loss of sole riparian rights and the temporary loss of title to 200 acres of land presents a valid takings claim.

State v. Trudeau, 139 Wis.2d 91 (1987)
The State holds title to the beds of navigable lakes to the OHWM. The OHWM establishes the boundaries of the public trust in a navigable lake.
County Board of Adjustment could not properly grant a floodplain variance for any part of a development site below the OHWM. It could grant a variance for the portion of the project above the OHWM only if it would not be contrary to the public interest.

Public title to navigable waters extends to areas within the OHWM which are covered with aquatic vegetation. Lakebed may be heavily vegetated by plants rising far above the water.

**PIERS**

*Northern Pine Land Co. v. Bigelow*, 84 Wis. 157 (1893)
Riparian has right to construct pier to navigable depth.

Pier built by nonriparian owner is a purpresture (permanent invasion of public property), but is not if built by riparian owner. Riparian owner may build pier to reach navigable water.

*McCarthy v. Murphy*, 119 Wis. 159 (1903)
Rights of riparian on navigable lake to build piers and wharves. Right to remove pier built by nonriparian owner.

*Thomas V. Ashland S. & I. R. L. R. Co.*, 122 Wis. 519 (1904)
Rights to navigation of owner on shoreline of navigable lake.

*Hathaway v. Milwaukee*, 132 Wis. 249 (1907)
Ownership of "new" waterfront on Lake Michigan in Milwaukee

*Doemel v. Jantz*, 180 Wis. 225 (1923)
The rights of a riparian owner must be condemned. Such riparian rights include right to build piers and walls to prevent erosion as well as the right to accretions and relictions; trust doctrine; public rights to the high and low water line; the public cannot trespass on land between the high and low water lines when the water is low.

*Jansky v. Two Rivers*, 227 Wis. 228 (1938)
Rights of riparian owner on Lake Michigan where there had been accretion and reliction.

*Bond v. Wojahn*, 269 Wis. 235 (1954)
Plaintiff ran his boat into defendant's pier. Even though the plaintiff had no PSC permit for the pier, it was not a *per se* nuisance without any proof that it actually interfered with navigation.

Riparian owner given qualified title to center of stream subject to power of state to preserve public use. One right of a riparian owner is to build a pier to reach navigable water.

History of control of navigable waters in Wisconsin.

*Colson v. Salzman*, 272 Wis. 397 (1955)
State ownership in trust of land under inland, meandered, navigable lake.

*Rondesvedt v. Running*, 19 Wis.2d 614 (1963)
Alluvion formed by accretion belongs to owner of the upland to which it is contiguous, but the riparian right to access to water and circumstances change this rule so that accretions in front of riparian property goes to the owner so access can be maintained.
De Simone v. Kramer, 77 Wis.2d 188 (1977)
Riparian owner obtains rights and title to soil formed by accretions and relictions exclusive as to all the
world, except where rights conflict with rights of public for navigation purposes. Accretion is the
increase in land caused by the gradual deposit by water of materials on the shores, which deposit replaces
the water at this location with dry land.

The prevailing doctrine that the causing or hastening of gradual deposits by artificial constructions, made
by persons other than the benefited and claiming owner, does to prevent the doctrine of accretion from
applying.

Nosek v. Stryker, 103 Wis.2d 633 (1981)
Discusses methods for determining riparian's exclusive rights to reach navigable waters. Exclusive use
zone extends only so far as necessary to reach line of navigability. Riparian right limited to pier long
enough and in position to reach nearest point of navigable water.

Sterlingworth Condominium Assoc. v DNR, 205 Wis 2d. 702(Ct. App., 1996)
This case deals with the cumulative impacts of piers, boats and other riparian impacts on the shores of
navigable waters. It updates Hixon and provides excellent language on cumulative impacts of piers and
boats in the near shore area. The Court stated:

"Whether it is one, nine or ninety boat slips, each slip allows one more boat which inevitably risks
further damage to the environment and impairs the public's interest in the lakes....In our opinion, the
DNR, in limiting Sterlingworth's permit...carried out its assigned duty as protector of the overall public
interest in maintaining one of Wisconsin's most important natural resources."

PUBLIC RIGHTS
Willow River Club v. Wade, 100 Wis. 86 (1898)
Stream bed title in riparian owner; right to fish is a public right. Question was as to right to take fish from
Willow River; discusses ownership of bed of stream and trust doctrine. What is navigable water.
Distinction between navigable water of the United States and navigable water of the state. Who owns fish
in water of United States as contrasted to state. Who owns fish in water. Riparian owners can't prevent
fishing in navigable water.

Johnson v. Eimerman, 140 Wis. 327 (1909)
Pond created by dam in now navigable creek is navigable. Rights of public in artificial condition thus
created.

Doemel v. Jantz, 180 Wis. 225 (1923)
The rights of a riparian owner must be condemned. Such riparian rights include the right to build piers
and walls to prevent erosion as well as the right to accretions and relictions; trust doctrine; public rights
to high and low water line; the public cannot trespass on land between the high and low water lines when
the water is low.

Haase v. Kingston Co-op Creamery Assn., 212 Wis. 585 (1933)
Public use of navigable artificial waters can legally become a natural condition.

Munninghoff v. Wisconsin Conservation Commission, 255 Wis. 252 (1949)
Authority of commission to issue licenses for privately owned land under navigable waters; trust doctrine; riparian rights; whether stream is navigable or not; trapping not an incident to navigation and so no public right to trap; right of navigation includes incidental use of bottom.

Muench v. PSC, 261 Wis. 492 (1952)
Trust doctrine extends to land only as long as it remains under navigable water. "Navigable in fact". PSC considers fishing, scenic beauty, boating, and hunting as public rights in authorizing dam. The existing "County Board Law" section of a state statute was held unconstitutional because it permitted the public right to enjoyment of fishing, hunting or natural scenic beauty in a navigable stream to be seriously impaired or destroyed through action of a county board. Such delegation of power by the Legislature, involving a complete abdication of the trust, is void.

Further; (1) Public Service Commission decisions are reviewable in court. (2) Any citizen of the state, even though not a riparian owner and living considerable distance from the waters concerned, can bring action as an aggrieved and directly affected party. (3) It is the duty of the state through its Conservation Commission to appear in behalf of the public before the Public Service Commission in their judicial capacity in such cases. (4) The Public Service Commission will be required to weigh public rights for recreational enjoyment of a stream against the public benefits which would result from the construction of a dam. (5) The right of the citizens of the state to enjoy our navigable streams for recreational purposes, including the enjoyment of a scenic beauty, is a legal right that is entitled to all the protection which is given to financial rights.

State v. Lake Delton, 93 Wis.2d 78 (1979)
Watching a water ski show is an incident of navigation. No single public use of navigable water is absolute.

Johnson v. Seipel, 152 Wis.2d 636 (Ct.App. 1989)
While the public has the right to unobstructed use of navigable waters for recreational and commercial purposes, users of public waters also owe a duty of reasonable care and use to riparian owners. The fact that a user of public waters does not violate any state or local boating laws does not relieve him/her of the duty to exercise ordinary care.

RIPARIAN RIGHTS
Kimberly & Clark v. Hewitt, 79 Wis. 334 (1891)
Rights of riparians on stream to water, reasonable flow.

Northern Pine Land Co. v. Bigelow, 84 Wis. 157 (1893)
Riparian has right to construct pier to navigable depth.

Case v. Hoffman, 84 Wis. 438 (1893)
Right of landowner to have flow of stream through lands.

Priewe v. Wisconsin State Land & Imp. Co., 93 Wis. 534 (1896)
Right to drain lake under Ch. 169, Laws of 1887. Right of riparians to have normal level maintained. Defines riparian land. State can make grants in waters only for public purposes.

Thomas v. Ashland S. & I. R. L. R. Co., 122 Wis. 519 (1904)
Rights of owner on shoreline of navigable lake.

Doemel v. Jantz, 180 Wis. 225 (1923)
The rights of a riparian owner must be condemned. Such riparian rights include the right to build piers and walls to prevent erosion as well as the right to accretions and relictions; trust doctrine. Riparian ownership gives a person exclusive privileges of the shore for the purposes of access to his/her land and the water. However, in so far as the structures erected by the riparian owners into navigable waters interfere with the public rights of navigation, a riparian owner takes and holds riparian rights subject to the public rights; public rights to high and low water line; the public cannot trespass on land between the high and low water lines when the water is low.

**Munninghoff v. Wisconsin Conservation Commission**, 255 Wis. 252 (1949)
Authority of commission to issue licenses for privately owned land under navigable waters; trust doctrine; riparian rights; whether stream is navigable or not; trapping not an incident to navigation and so no public right to trap; right of navigation includes incidental use of bottom.

**Bond v. Wojahn**, 269 Wis. 235 (1954)
Plaintiff ran his boat into defendant’s pier. Even though the plaintiff had no PSC permit for the pier, it was not a *per se* nuisance without any proof that it actually interfered with navigation.

Riparian owner given qualified title to center of stream subject to power of state to preserve public use. One right of owner is to build a pier to reach navigable water.

History of control of navigable waters in Wisconsin.

**Colson v. Salzman**, 272 Wis. 397 (1955)
State ownership in trust of land under inland, meandered, navigable lake.

Access easement granted to lot owners in a plat did not make them riparian owners. The original owner of the plat as a riparian owner, could permit lot owners to build piers subject to superior state and federal rights.

**Bino v. City of Hurley**, 273 Wis. 10 (1955)
Defendants passed an ordinance prohibiting swimming and boating on a lake - plaintiffs were riparian owners.

Riparian rights are substantial and valuable property rights and cannot be taken without compensation.

Dissent - riparian rights are subject to power of state or city to protect purity of water supply of a city.

**Rondesvedt v. Running**, 19 Wis.2d 614 (1963)
Alluvion formed by accretion belongs to owner of the upland to which it is contiguous, but the riparian right to access to water and circumstances change this rule so that accretions in front of riparian property goes to owner so access can be maintained.

**Mayer v. Grueber**, 29 Wis.2d 168 (1965)
Whether or not riparian rights are conveyed with the adjoining uplands depends largely upon the intent of the grantor, it is only presumed that the owner of the upland has riparian rights - this presumption doesn't apply where an artificial body of water is concerned. An adjoining owner must also own the right to use of the lake.

**Nosek v. Stryker**, 103 Wis.2d 633 (1981)
Discusses methods for determining riparian's exclusive rights to reach navigable waters. Exclusive use zone extends only so far as necessary to reach line of navigability. Riparian right limited to pier long enough and in position to reach nearest point of navigable water.

**W.H. Pugh Coal Co. v. State, 105 Wis.2d 123 (Ct.App. 1981)**

The right of a riparian owner to accretions upon his/her land is absolute against all the world except to the public's rights of navigation. However, a riparian owner is not allowed to take title to land accretion which was induced by his/her actions.

The fact that the State holds lake beds in public trust is not sufficient to grant it title to accretions on a riparian owner's land without just compensation.

**Zinn v. State, 112 Wis.2d 417 (1983)**

A riparian owner who temporarily lost title to 200 acres of riparian property and temporarily lost his sole riparian rights due to an erroneous OHWM determination presented a valid takings claim.

**State v. Bleck, 114 Wis.2d 454 (1983)**

While the public trust doctrine is designed to protect the rights of all members of the public in navigable waters, Wisconsin law has recognized the existence of certain common law rights that are incident of riparian ownership (i.e., access to and from lake, right to build wharves and piers, right to swimming, boating, and boating, etc.). The fact that §30.12 only allows riparians to apply for structure permits does not violate the public trust doctrine. Rather, the legislature simply recognized the common law distinction between riparians and nonriparians. Such riparian rights are still subject to the public's paramount right and interest in navigable waters.

**Cassidy v. Dept. of Natural Resources, 132 Wis.2d 153 (Ct.App. 1983)**

An easement holder does not have the status of a riparian owner under §30.12, Stats. and therefore may not be granted a structure permit.

**de Nava v. DNR, 140 Wis.2d 213 (Ct.App. 1987)**

Even if an easement grants the holder the right to install a mooring buoy and boat lift, holder of such easement is not a riparian owner.

Riparian owners have the exclusive right of access to and from navigable waters to his/her shore.

Riparian owners also have the right to build piers, harbors, wharves, booms and similar structures in aid of navigation.

Riparian rights are not freely alienable in the case of natural lakes.

**Johnson v. Seipel, 152 Wis.2d 636 (Ct.App. 1989)**

While the public has the right to unobstructed use of navigable waters for recreational and commercial purposes, users of public waters also owe a duty of reasonable care and use to riparian owners.

**Klingseisen v. DNR, 163 Wis.2d 921 (1991)**

Riparian owners along an artificial channel did not own the water flowing from a navigable waterway and therefore could not rightfully exclude the public from using the water over their land.

**Godfrey Co. v. Lopardo, 164 Wis.2d 352 (Ct.App. 1991)**

Sec. 30.131, Wis. Stats., gives riparian rights to easement holders in limited circumstances. That is, it grants an easement holder the right to maintain a pier or wharf if the statutory criteria are met.
Each riparian owner is entitled to exclusive possession to the extent necessary to reach navigable waters, to have reasonable ingress and egress to navigable waters, and to have reasonable access for bathing and swimming. Thus, in a boundary dispute, the court was to balance the rights of all lakefront owners and the public.

**Sterlingworth Condominium Assoc. v DNR, 205 Wis 2d. 702(Ct. App., 1996)**

This case deals with the cumulative impacts of piers, boats and other riparian impacts on the shores of navigable waters. It updates Hixon and provides excellent language on cumulative impacts of piers and boats in the near shore area. This case discusses what are considered reasonable uses for riparian proprietors for the placement of structures in the near shore area.

### STRUCTURES AND FILLS

**Doemel v. Jantz, 180 Wis. 225 (1923)**

The rights of a riparian owner must be condemned. Such riparian rights include the right to build piers and walls to prevent erosion as well as the right to accretions and relictions; trust doctrine; public rights to high and low water line; trespass on land between high and low water line.

**S. S. Kresge Co. v. Railroad Commission, 204 Wis. 479 (1931)**

Action for declaratory judgment of plaintiff's right to erect a building over bed of Rock River in Beloit. No one can be given power to invade the bed of a stream which would preclude the state from removing such structures when necessary in aid of navigation.

**Luening v. PSC, 261 Wis. 516 (1952)**

Federal navigability test.

**State v. PSC, 275 Wis. 112 (1956)**

Application by City of Madison to fill on bed of Lake Wingra at Vilas Park - granted - review sought by State of Wisconsin at request of Wisconsin Conservation Commission.

Trust doctrine is not violated by minor alterations - lakes do not have to remain in the same condition for all time when done for public purposes.

Permit gives permission to use the property only, it is not a grant of the property.

**Hixon v. Public Service Commission, 32 Wis.2d 608, 146 N.W. 2d 577 (1966)**

While the State of Wisconsin holds the beds of navigable waters in trust for all its citizens, the trust doctrine does not prevent minor alterations of the natural boundaries between water and land. However, in this case, the Court ordered a 120 foot long breakwater to be removed as an obstruction. The Court noted that the State of Wisconsin must look at the cumulative impacts of fills, stating

"There are over 9,000 navigable lakes in Wisconsin covering an area of over 54,000 square miles. A little fill here and there may seem to be nothing to become excited about, but one fill, though comparatively inconsequential, may lead to another, and another, and before long a great body of water may be eaten away until it may no longer exist. Our navigable waters are a precious natural heritage; once gone, they disappear forever."

**State v. Lamping, 36 Wis.2d 328 (1967)**

Floating bog defined. A material factor to be considered in determining whether a peninsula such as that involved in the instant case is a floating bog on land is the degree to which it is anchored or fastened to the bed.
the underlying lake bed; if it is so securely anchored or fastened thereto that its surface does not rise or fall with the raising or lowering of the lake's water level, it would no longer constitute a floating bog.

**Claflin v. State Department of Natural Resources, 58 Wis.2d 182 (1973)**

Determination that specific structure is detrimental to public interest on grounds that it impairs natural beauty of lake is proper basis for denial of a permit for the structure. The natural beauty of our northern lakes is one of the most precious heritages Wisconsin citizens enjoy. It is entirely proper that the natural beauty should be protected against specific structures that may be found to mar that beauty.

**State v. McFarren, 62 Wis.2d 492 (1974)**

Bulkhead line defined.

A bulkhead line is not merely the natural shoreline but is a line legislatively established by a municipality which may differ from the existing shoreline. Existence of bulkhead is part of description of violation of s. 30.12.

**State v. Deetz, 66 Wis.2d 1 (1974)**

Section 30.12, Stats., prohibiting deposit of materials or placing of any structure on the bed of a navigable water without a permit merely restates the common law and was designed to prohibit only deliberate fills.

The State's contention that under the public trust doctrine a cause of action arises whenever there is interference with the public's right to use navigable waters, irrespective of the cause thereof, is rejected because while the "public trust" doctrine grants both the State and citizens acting on its behalf the standing to vindicate rights created by existing state law, it does not of itself create a cause of action.

**State v. Bleck, 114 Wis.2d 454 (1983).**

Only riparian owners may obtain a structure permit under §30.12. This is merely a recognition of the common law distinction between riparian and nonriparian rights.

Since "structure" is not defined for purposes of Chapter 30, the word is to be given its common meaning. The dictionary definition of "structure" is "something constructed or built...something made up of more or less interdependent elements or parts..."

A nonriparian's ski jump constituted a "structure" within the meaning of §30.12.

The application of §30.12 to a nonriparian's ski jump does not regulate the public's recreational use of navigable waters, but only the placement of unlawful structures.

**Cassidy v. Dept. of Natural Resources, 132 Wis.2d 153 (Ct.App. 1983)**

The holder of an easement is not a riparian owner for the purposes of §30.12 and therefore cannot be granted a structure permit.

A riparian owner does not have an absolute right to place structures on a lakebed because the structure must meet the statutory criteria before the DNR will issue a permit allowing the structure.

**de Nava v. DNR, 140 Wis.2d 213 (Ct.App. 1987)**

Even if an easement grants the holder the right to install a mooring buoy and boat lift, the easement holder is not a riparian owner. An easement only grants the right to use or privilege in the land of another and not title. Easement holder could not maintain boat buoy and boat lift under §30.12, Stats.
SURFACE WATERS

**Thomson v. Public Service Commission**, 241 Wis. 243 (1942)

The Supreme Court adopted the Restatement of Torts definition of surface waters. This definition is as follows:

"The term 'surface waters' is used to describe those casual waters which accumulate from natural sources and which have not yet evaporated, been absorbed into the earth or found their way into a stream or lake. The term does not comprehend waters impounded in artificial ponds, tanks, or water mains."

**Houselet v. DNR**, 110 Wis.2d 280 (Ct.App. 1981)

Surface waters and lakes are not mutually exclusive categories. Therefore, the DNR properly classified part of a lake as a wetland.

Under the Restatement definition of "surface waters" adopted in Thomson v. Public Service Commission, a lake cannot be a wetland and a lake at the same time. However, Wisconsin regulations define surface waters more broadly than Thomson (NR 101.03(4) & NR 102.01(7)). In this case, the broader definitions controlled.

**Crest Chevrolet, etc. v. Willemsen**, 129 Wis.2d 129 (1986)

Under the reasonable use doctrine, an analysis of the social utility of the actor's conduct which interferes with the natural surface water flow is not required.

Discussion of reasonable use doctrine.

TAKINGS

**Just v. Marinette County**, 56 Wis.2d 7 (1972)

Compensation is necessary when restrictions are placed on property in order to create a public benefit rather than to prevent a public harm. A shoreland ordinance which maintains the natural status quo of the environment does not create a public benefit, but alleviates a public harm.

The Court stated, "Is the ownership of a parcel of land so absolute that man can change its nature to suit any of his purposes?...An owner of land has no absolute and unlimited right to change the essential natural character of his land so as to use it for a purpose for which it was unsuited in its natural state and which injures the rights of others...It is not an unreasonable exercise of the [police power] to prevent harm to public rights by limiting the use of private property to its natural uses."

If a regulation is to avoid a public harm, then effects on private landowners are not compensable unless the regulation results in a value diminution to the landowner which is so great as to amount to a confiscation.

The depreciation of land value resulting from a state restriction is not to be based on what the land would be worth if it could be filled and used for commercial or residential development, but on the use of the land in its natural state. In reaching this conclusion, the Court stated, "The Justs argue their property has been severely depreciated in value. But this depreciation of value is not based on the use of the land in its natural state but on what the land would be worth if it could be filled and used for the location of a dwelling. While loss of value is to be considered in determining whether a restriction is a constructive taking, value based upon changing the character of the land at the expense of harm to public rights is not an essential factor or controlling."


The fact that the State holds lake beds in public trust is not sufficient to grant it title to accretions on a riparian owner's land without just compensation.

A compensable taking occurs when a government restriction placed on property "practically or substantially renders the property useless for all reasonable purposes."

Temporary takings are compensable.

The loss of sole riparian rights and of title to 200 acres of riparian property due to an erroneous OHWM determination by the DNR presents a valid takings claim.

The fact that the DNR had not intended to take Zinn's property is irrelevant because it is the effect of the State's action that triggers the Just Compensation Clause, not the government's intent.

M & I Marshall Bank v. Town of Somers, 141 Wis.2d 271 (1987)

The takings analysis outlined in Just is not limited to a situation where the lands involved are connected to the state's duty under the public trust doctrine. Whether the regulated land is a wetland within a shoreland area, or land within a primary enforcement corridor, or an isolated swamp - the test to be applied is the same: public benefit vs. public harm.

Otte v. DNR, 142 Wis.2d 222 (Ct.App. 1987)

The DNR's order to a riparian landowner to restore a filled ditch at his own expense was a compensable taking because it deprived Otte of substantially all beneficial use of a portion of his land (i.e., he could no longer use the land occupied by the ditch for any other purpose.)

Sec. 32.01(1), Stats, does not authorize the DNR to take a person's private property for the purpose of aiding it in regulating and controlling a lake's level.

TRUST DOCTRINE

Mendota Club v. Anderson, 101 Wis. 479 (1899)

Question was as to status of a certain area on the north end of Lake Mendota. The building of the Farwell Dam in 1850 raised the level of water in the lake some 4 feet giving rise to the question of whether the area was navigable water and of ownership to its bottom, as contrasted to rights claimed through a tax deed allegedly conveying the areas. Discusses trust doctrine and also status of artificial condition created by dam.

Pewaukee v. Savoy, 103 Wis. 271 (1899)

This was an appeal from a judgment restraining defendants from placing a fence along street line to prevent frontage therefrom to Pewaukee Lake. The natural shoreline did not reach the limit or the street, but an artificial line maintained for 20 years brought the water level to the street limit. Case discusses trust doctrine. Holds artificial condition had become its natural condition by existence of new level for more than 20 years and, as regarding the submerged lands, are characteristics of a natural lake to that extent. Dedication by riparian owners conclusively presumed where it exists for 20 years. Status of streets terminating on navigable water.

Priewe v. Wis. S. L. & Imp. Co., 103 Wis. 537 (1899)

Validity of scheme to drain Muskego Lake Purportedly under ch. 169, Laws of 1887, ch. 202, Laws of 1891. Right of riparians to have normal level maintained. Defines riparian land. State cannot destroy the rights of a riparian owner on a lake without compensation or without the owner's consent. Discusses trust doctrine - legislature can't free itself of the trust.
Muench v. PSC, 261 Wis. 492 (1952)
Trust doctrine extends to land only as long as it remains under navigable water. "Navigable in fact". PSC considers fishing, scenic beauty, boating, and hunting as public rights in authorizing dam.

The existing "County Board Law" section of a state statute was held unconstitutional because it permitted the public right to enjoyment of fishing, hunting or natural scenic beauty in a navigable stream to be seriously impaired or destroyed through action of a county board. Such delegation of power by the Legislature, involving a complete abdication of the trust, is void.

Further; (1) Public Service Commission decisions are reviewable in court. (2) Any citizen of the state, even though not a riparian owner and living considerable distance from the waters concerned, can bring action as an aggrieved and directly affected party. (3) It is the duty of the state through its Conservation Commission to appear in behalf of the public before the Public Service Commission in their judicial capacity in such cases. (4) The Public Service Commission will be required to weigh public rights for recreational enjoyment of a stream against the public benefits which would result from the construction of a dam. (5) The right of the citizens of the state to enjoy our navigable streams for recreational purposes, including the enjoyment of a scenic beauty, is a legal right that is entitled to all the protection which is given to financial rights.

State v. PSC, 275 Wis. 112 (1956)
Application by City of Madison to fill on bed of Lake Wingra at Vilas Park - granted - review sought by State of Wisconsin at request of Wisconsin Conservation Commission.

Trust doctrine is not violated by minor alterations - lakes do not have to remain in the same condition for all time when done for public purposes.

Permit gives permission to use the property only, it is not a grant of the property.

Just v. Marinette County, 56 Wis.2d 7 (1972)
Trust doctrine and state's exercise of police power.
The active public trust duty of the state in respect to navigable waters requires the state not only to promote navigation but also to protect and preserve those waters for fishing, recreation, and scenic beauty. The public trust extends to lands adjacent to navigable waters. Shoreland zoning is one means for the state to accomplish its duties under the public trust.

"The state of Wisconsin under the trust doctrine has a duty to eradicate the present pollution and to prevent further pollution in its navigable waters. This is not, in a legal sense, a gain or a securing of a benefit by the maintaining of the natural status quo of the environment." Since shoreland zoning merely protects the status quo of the environment, it cannot be held to result in a compensable taking.

Case examines conflict between the state's duty as a protector of the public interest in stopping the despoliation of natural resources and an owner's asserted right to use his property as he wishes. Restricting conversion of land, when land in present state has public benefit, is not an unreasonable exercise of police power. The Court stated, "Is the ownership of a parcel of land so absolute that man can change its nature to suit any of his purposes?...An owner of land has no absolute and unlimited right to change the essential natural character of his land so as to use it for a purpose for which it was unsuited in its natural state and which injures the rights of others...It is not an unreasonable exercise of the [police power] to prevent harm to public rights by limiting the use of private property to its natural uses."

State v. Deetz, 66 Wis.2d 1 (1974)
Section 30.12, Stats., prohibiting deposit of materials or placing of any structure on the bed of a navigable water without a permit merely restates the common law and was designed to prohibit only deliberate fills.

The State's contention that under the public trust doctrine a cause of action arises whenever there is interference with the public's right to use navigable waters, irrespective of the cause thereof, is rejected because while the "public trust" doctrine grants both the State and citizens acting on its behalf the standing to vindicate rights created by existing state law, it does not of itself create a cause of action.

W.H. Pugh Coal Co. v. State, 105 Wis.2d 123 (Ct.App. 1981)
The fact that the State holds lake beds in public trust is not sufficient to grant it title to accretions on a riparian owner's land without just compensation.

State v. Bleck, 114 Wis.2d 454 (1983)
Public trust doctrine has been expanded to protect not only commercial navigation, but also recreational and nonpecuniary interests. Even though the state holds the beds of navigable waters in trust for the public, it still may authorize limited encroachments upon these beds if the public interest would be served by doing so.

The application of §30.12 to a nonriparian's ski jump did not violate the public trust doctrine because riparian rights under that statute were still subject to the paramount public interest in navigable waters and because the statute only regulated the placement of structures on the beds of navigable waters, not the recreational use and enjoyment of those waters.

Wisconsin Environmental Decade v. DNR, 115 Wis.2d 381 (1983).
In deciding whether to issue water permits, the DNR must consider the public interest in navigable waters, but the public trust doctrine was not to be "expanded to cover ... downtown preservation." In other words, the DNR need not consider secondary socioeconomic impacts in making the threshold decision of whether to prepare an EIS.

State v. Trudeau, 139 Wis.2d 91 (1987)
The boundary of the public trust associated with the bed of a navigable body of water is the OHWM. The state holds title to the beds of lakes up to the OHWM.

Village of Menomonee Falls v. DNR, 140 Wis.2d 579 (1987)
The delegation of authority under the public trust doctrine is permissible when in furtherance of that trust and where delegation will not block the advancement of the paramount public rights in navigable waters. Therefore, the village did not have the power to modify the creek under home rule.
The enjoyment of scenic beauty is one of the public rights in navigable waters to be protected by the State under the public trust doctrine.

Klingseisen v. DNR, 163 Wis.2d 921 (1991)
To be effective, the public trust doctrine must include the protection of public, artificial waterways that are directly and inseparably connected with natural and navigable waters.

WATERCOURSES
Hoyt v. City of Hudson, 27 Wis 656 (1871)
Discusses distinction between the flow of surface waters and a watercourse. The Court defines "watercourse" as follows:
"The term `watercourse' is well defined. There must be a stream usually flowing in a particular direction, though it need not flow continually. It may sometimes be dry. It must flow in a definite channel, having a bed, sides or banks, and usually discharge itself into some other stream or body of water. It must be something more than a mere surface drainage over the entire surface of a tract of land, occasioned by unusual freshets or other extraordinary causes. It does not include the water flowing in the hollows or ravines in land which is the mere surface waters from rain or melting snow, and is discharged through them from a higher to a lower level, but which at other times are destitute of water. Such hollows or ravines are not in legal contemplation water-courses."

Lessard v. Stram, 62 Wis. 112 (1885)

The mere occasional flow of surface water through a ravine does not constitute a "watercourse." The Court applied the Hoyt definition in rejecting a claim that surface water occasionally flowing out of a coolie and over lowlands in no discernable pattern was a watercourse.

Lally v. Rossman, 82 Wis. 147 (1892)

In government grants, the watercourse itself is the boundary, not the meander line.
### Appendix 2

**ADMINISTRATIVE AND MANUAL CODES AFFECTING WATER REGULATION AND ZONING PROGRAM**

#### Administrative Code

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NR 1.95</td>
<td>Wetlands Preservation, Protection and Management</td>
</tr>
<tr>
<td>NR 115</td>
<td>Wisconsin's Shoreland Management Program</td>
</tr>
<tr>
<td>NR 116</td>
<td>Wisconsin's Floodplain Management Program</td>
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<td>NR 117</td>
<td>Dam Construction</td>
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<tr>
<td>NR 118</td>
<td>Standards and Criteria for the Lower St. Croix Natural Scenic Riverway</td>
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<tr>
<td>NR 129</td>
<td>Floodplain and Shoreland and Mapping Grant Program</td>
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<tr>
<td>NR 150</td>
<td>Wisconsin Environment Policy Act Procedures for Department Actions</td>
</tr>
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<td>NR 299</td>
<td>Water Quality Certification</td>
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<tr>
<td>NR 300</td>
<td>Fee for Water Regulation Permits and Approvals</td>
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<tr>
<td>NR 301</td>
<td>Relationship of Water Regulation Enforcement and Permit Approvals</td>
</tr>
<tr>
<td>NR 302</td>
<td>Management of Wisconsin Wild Rivers</td>
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<tr>
<td>NR 320</td>
<td>Regulation of Bridges In or Over Navigable Waterways</td>
</tr>
<tr>
<td>NR 325</td>
<td>Maintenance, Repair or Removal Procedures for Boathouses and fixed Houseboats on Navigable Waterways</td>
</tr>
<tr>
<td>NR 326</td>
<td>Regulation of Piers in Navigable Waterways</td>
</tr>
<tr>
<td>NR 330</td>
<td>Warning Signs and Portages for Dams</td>
</tr>
<tr>
<td>NR 340</td>
<td>Sand, Gravel or Construction Excavation and Reclamation</td>
</tr>
<tr>
<td></td>
<td>Associated with Navigable Waterways and Adjacent Areas</td>
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<tr>
<td>NR 345</td>
<td>Removal of Material from the Beds of Waterways</td>
</tr>
<tr>
<td>NR 346</td>
<td>Dredging Contract Fees</td>
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<td>NR 347</td>
<td>Regulation of Dredging Projects</td>
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#### Manual Codes

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<tr>
<th>Code</th>
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<tr>
<td>1462.4</td>
<td>Liaison Between Corps of Engineers and...</td>
</tr>
<tr>
<td>1606.1</td>
<td>WEPA Procedures for All DNR Actions</td>
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<tr>
<td>3281</td>
<td>Water Quality Certifications as Required by Section 401</td>
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<tr>
<td>3500.6</td>
<td>Delegation of Authority to Approve:.....</td>
</tr>
<tr>
<td>3506.1</td>
<td>Permit and/or Approval Procedure:.....</td>
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<tr>
<td>3506.2</td>
<td>Procedures for Processing Violations</td>
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<td>3506.3</td>
<td>Procedure for Time Limit Extension</td>
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<tr>
<td>3535.1</td>
<td>Application for Sand Blanket Permit</td>
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<tr>
<td>3536.1</td>
<td>Riprap Shore Protection</td>
</tr>
<tr>
<td>3539.1</td>
<td>Temporary Drawdown of Impoundment</td>
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<tr>
<td>3551.1</td>
<td>Floodplain Management</td>
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<td>3552.1</td>
<td>Sewer and Water Systems in Floodplain Areas - Plan Review</td>
</tr>
<tr>
<td>3560.9</td>
<td>Portage levee Plan</td>
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<tr>
<td>3561.11</td>
<td>Authority Required for Bridges and Culvert Crossing:.....</td>
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<tr>
<td>3562.1</td>
<td>Procedure for Investigating Dams to Achieve Boating Safety Objectives</td>
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<tr>
<td>3564.1</td>
<td>Plan Approval for Dams on Nonnavigable Streams</td>
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<tr>
<td>3565.1</td>
<td>Department Projects Located In Adjacent to Navigable Waters</td>
</tr>
<tr>
<td>3570.4</td>
<td>Wild Rivers Program</td>
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<tr>
<td>3591.1</td>
<td>Implementation of the Lower St. Croix River Protection Act</td>
</tr>
<tr>
<td>9341.1</td>
<td>Cash Collecting and Permitting Procedures</td>
</tr>
</tbody>
</table>
APPENDIX 3

WEPA Action Needed for Major Water Regulation and Zoning Actions

A. BACKGROUND

Chapter NR 150, Administrative Code, sets out the procedures for Department compliance with the Wisconsin Environmental Policy Act (WEPA). Section NR 150.03 categorizes Department actions by type to aid in the determining whether an Environmental Impact Statement (EIS) is needed. Type I actions always require an EIS. No water regulatory actions are Type I by themselves. Type II actions may or may not require an EIS depending on the individual significance. All Type II actions require an Environmental Assessment (EA). Type III actions do not normally cause significant environmental effects. Unless the Department determines otherwise, these actions will not require an EA or an EIS.

The following type list shows the actions by their statutory authority that fall into each of the action types. The numbers under the statute number are the specific NR 150 reference.

This type list is only intended to act as a fast reference to the WEPA action needed for the major water regulation and zoning actions. NR 150 should be consulted for further guidance and directions.
### Type 11 Actions (Require EA)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>30.10</td>
<td>Approval of barge fleeting areas</td>
</tr>
<tr>
<td>150.03(2)(b)11</td>
<td></td>
</tr>
<tr>
<td>30.11, 24.39</td>
<td>Bulkhead lines and/or lakebed leases</td>
</tr>
<tr>
<td>150.03(3)(b)5.</td>
<td></td>
</tr>
<tr>
<td>30.12(2), 150.03(2)(b)6.</td>
<td>Solid piers, groins, breakwaters and jetties constructed in navigable waters excluding those identified in NR 326.04(3)(a).</td>
</tr>
<tr>
<td>30.18(l)(a), 150.03(2)(b)9.</td>
<td>Surface water diversion for maintaining water levels and for mining</td>
</tr>
<tr>
<td>30.19, 150.03(2)(b)3.</td>
<td>Connected waterway construction; and grading and unconnected waterway construction when related to mining or mineral extraction or including draining or filling of wetlands.</td>
</tr>
<tr>
<td>30.195, 150.03(2)(b)4.</td>
<td>Changing the stream course involving over 500 feet of stream length</td>
</tr>
<tr>
<td>30.196, 150.03(2)(b)10</td>
<td>Enclosures of navigable waters</td>
</tr>
</tbody>
</table>

### Type III Actions

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>30.10, 30.12, 31.23</td>
<td>Private bridges and culverts.</td>
</tr>
<tr>
<td>150.03(3)(b)10.</td>
<td></td>
</tr>
<tr>
<td>30.12(3)(a) 1, 2, 3, 4</td>
<td>Other structures including maintenance work on existing structures, sand blankets, fish cribs, riprap and ford</td>
</tr>
<tr>
<td>150.03(3)(b)(6).</td>
<td></td>
</tr>
<tr>
<td>30.13, 150.03(3)(b)5.</td>
<td>Pierhead lines</td>
</tr>
<tr>
<td>30.18(l)(b) 150.03(3)(b)9.</td>
<td>Surface water diversion for agricultural and irrigation purposes</td>
</tr>
<tr>
<td>30.19, 150.03(3)(b)3.</td>
<td>Boatslips, unconnected waterways and grading unless related to mineral extraction or filling or draining of wetlands.</td>
</tr>
<tr>
<td>30.195, 150.03(3)(b)4.</td>
<td>Changing the stream course if involving 500 feet or less of stream thread.</td>
</tr>
<tr>
<td>87.30, 150.03(3)(b)11 &amp; 13</td>
<td>Approval of floodplain ordinances and amendments and floodplain, floodway studies and delineations.</td>
</tr>
<tr>
<td>59.971,144.26,61.357,62.231</td>
<td></td>
</tr>
<tr>
<td>150.03(3)(b)12.</td>
<td>Approval of ordinances, wetland inventory maps and amendments.</td>
</tr>
<tr>
<td>NR 299, 150.03(3)(b)42</td>
<td>&quot;401&quot; - water quality determinations</td>
</tr>
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</table>
### Type II Actions (Require EA)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.20, 150.03(2)(b)2.</td>
<td>All dredging that involves 3000 cubic yards or more of material or potential for hazardous wastes in the sediments exists or involves draining or filling or wetlands. Maintenance dredging projects authorized within 10 years from the date of application are excluded provided no hazardous wastes or draining or filling of wetlands.</td>
</tr>
<tr>
<td>31.02, 150.03(2)(b)(8).</td>
<td>New levels or drawdowns of controlled lakes and flowages if dam has at least 6 foot head and holds 15 acre-feet or more of water.</td>
</tr>
<tr>
<td>31.05, 150.03(2)(b)7.</td>
<td>Construct, raise, enlarge dams, and non-navigable stream dam plan approval where the dam has at least 6 foot head and holds 15 acre-feet or more of water at maximum water level.</td>
</tr>
<tr>
<td>31.185, 150.03(2)(b)7.</td>
<td>Dam abandonment if dam has at least 6 foot head and holds 15 acre-feet or more at maximum water storage elevation.</td>
</tr>
</tbody>
</table>

### Type III Actions

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.20, 150.03(3)(b)2.</td>
<td>Maintenance dredging for authorizes projects within the past 10 years and all other dredging less than 3000 cubic yards provided no hazardous wastes in sediments or no draining or filling of wetlands.</td>
</tr>
<tr>
<td>31.02, 150.03(3)(b)8.</td>
<td>New levels or drawdown if dam has less than 6 feet head and holds less than 15 acre-feet of water. Emergency dam safety drawdown.</td>
</tr>
<tr>
<td>31.05, 150.03(3)(b)7.</td>
<td>Construct, raise, enlarge dams and non-navigable stream dam plan approval if dam has less than 6 foot head and holds less than 15 acre-feet of water at maximum storage.</td>
</tr>
<tr>
<td>31.185, 150.03(3)(b)7.</td>
<td>Dam abandonment if dam has less than 6 foot head and holds less than 15 acre-feet of water at minimum water storage; all transfers of ownership.</td>
</tr>
</tbody>
</table>
Date: January 30, 1987  File Ref: 3500

To: WZ Program Staff

Put In: Water Regulation Handbook Appendix 3

From: Scott Hausmann - WZ6

Distribution: All Program Staff

Subject: Water Regulation Handbook Update - Appendix 3

Revisions to NR 150 go into effect on February 1, 1987. This directive is intended to clarify these latest changes to NR 150. This rescinds and replaces the May 4, 1984 revision.

The NR 150 Administrative Code organizational format is new in that all of this program's regulatory items are listed in one place (see NR 150.03(8)(f)). Central office staff should note the type list for plans and policies (see NR 150.03(6)(b) 2, 3 and 4). There has also been an additional type action category added which, for the most part, reduces the number of mandatory EA's. Although this new list may have deleted some EA's, it has added a few new activities that were previously unlisted.

Changes you should note are as follows:

1. An additional type action category has been added (see NR 150.03(1), (2), (3) and (4) and NR 150.20). Note especially Type III actions. This is the new type action category. Although no EA is needed (except in unusual cases) either a news release or legal notice is required to comply, at a minimum, with this type action. Copies of the release/notice should be sent to BEAR.

2. Please note that channel changes less than 500 feet in length are in this new Type III category and a news release is required if we don't issue a notice. Like other Type III actions, an EA is not normally required.

3. A news release or legal notice for dam construction on nonnavigable waters 'is required. Although a new requirement, we believe a standard news release form could be developed for small dams on nonnavigable waters that would basically be a fill in the blank (i.e., description and location of dam and DNR contact person) to comply with this requirement.

4. Drawdowns for non-emergency safety inspections now require a news release. District Coordinators and the Dam Safety Inspection Unit should be particularly cognizant of this requirement.

As you review NR 150 and familiarize yourself with its content, you should pay additional attention to the following sections because they directly or indirectly influence the Water Regulation and Zoning program. Those sections are: NR 150.02(18), NR 150.03(5)(a)ll, NR 150.08(8)(c)8 and 17, NR 150.10 and NR 150.20.

If you do get a substantial public response to one of the new Type III notices, you should consult with your local environmental impact coordinator to decide what to do. BEAR is drafting guidance on this.

SH:el
DATE: February 25, 1999

INSERT: Appendix 3 Water Regulation Handbook

TO: Regional Directors
    Air and Waste Division Bureau Directors
    Water Division

FROM: David Meier – AD/5

SUBJECT: WEPA Compliance for After-the-Fact Permits

A recent situation where an after-the-fact Air permit was issued raised questions regarding the need for Wisconsin Environmental Policy Act (WEPA) compliance in circumstances involving after-the-fact Department regulatory decisions. The purpose of this memo is to clarify the issue and provide guidance for your affected program staff who may encounter a situation where someone is seeking an after-the-fact approval or permit.

All Department decisions that may affect the quality of the human environment are subject to WEPA. **This includes all regulatory actions, whether before or after the fact.** We have further defined what this means in terms of process and documentation through the action type list in NR 150. Thus, for example, many regulatory actions are identified as Type III or IV which do not normally require either an Environmental Assessment (EA) or Environmental Impact Statement (EIS).

The specific form of appropriate WEPA compliance for an after-the-fact situation (that would before the fact be a Type II action requiring at least an EA) should be determined on a case-by-case basis through consultation with the appropriate ISS staff. For decentralized regulatory decisions this consultation should be through the regional EA staff. For central office decisions it should be with Jim Pardee in ISS’s Environmental Analysis and Liaison Section. We expect most after-the-fact situations can be appropriately handled with a brief memo to the file explaining why no EA is required. In some circumstances, such as a high level of public controversy or potential impacts to sensitive resources, an EA may be required.

The program staff making the regulatory decisions are responsible for assuring WEPA compliance for after-the-fact permits and approvals. Please provide this guidance to the affected program supervisors.

cc: Jim Pardee - SS/6
    Regional EA staff
    Jim Addis - SS/6
Appendix 4

BENCHMARK AND FIELD BOOK PROCEDURES

If survey work is required under chapters 30 and 31, it should be based on a vertical control point or benchmark.

A benchmark is a point of known elevation and position. It enables surveyors to reestablish elevations taken from previous surveys without duplicating the survey.

A benchmark establishes or refers to a datum plane. Benchmarks established by the United State Geological Survey (USGS) or the National Geodetic Survey (NGS, formerly the United States Coast and Geodetic Survey) refer to the mean sea level of the Atlantic Ocean taken over a 19-year cycle. Mean sea level is the datum plane most commonly referenced in Wisconsin, but there are several other datum planes: 1) Corps of Engineers datum (New York City datum), is commonly used on the Fox and Mississippi Rivers; 2) International Great Lakes Datum; 3) local city datum; and 4) assumed or site datum. You should always be aware of the datum you are working with.

FINDING A BENCHMARK

Before establishing a benchmark, check to see if any already exist within the immediate area. USGS and NGS survey markers are often (but not always) shown on topographic maps. These maps are a good place to start looking. A printed list of benchmarks is available from the central office, which locate and describe USGS and NGS benchmarks. The list is referenced to the 15-minute quadrangles.

Also check the Department's computer-based benchmark file. This file presently contains Department data and some federal agency data. We are in the process of expanding the file to include Wisconsin DOT data and USGS data. The file should be a definitive source of all vertical control data in Wisconsin by January of 1984. Until this data is complete, contact the Central office for a more complete search of the area.

USING THE BENCHMARK FILE

To use the computer data file you will need: (1) a computer terminal capable of communicating with the Madison Area Academic Computer Center (MACC), and (2) a valid user number on the system which allows MACC to bill you for their services. The program is entirely tutorial, which means that all you need to know is how to access the computer. The procedure is as follows:

1. Access a computer line by dialing
   a. 263-1111 or 263-1100 (low speed)
   b. 263-1265 (high speed)

2. Activate the terminal
   a. Type: UWLG if you are using a hard copy terminal (you get a paper printout)
   b. Type: UWTR if you are using a CRT (a video display)

3. Enter your ID number
Type exactly as following: @RUN, (five digit project number),(10 digit ID), $(dollars you are willing to spend)

Approximate cost will be $2.00

If you do not have a project number or 10-digit ID, see your management information specialist.

4. Enter password

All ID's are protected by a password which you must know in order to access an account.

5. Run the program by typing

Type exactly as follows: @ADD DNRBMI*RUN.RETRIEVALS

The program will then be loaded onto the computer and will take you step-by-step through the selection of benchmarks.

The basic request for information (what you will type in) will be in the form of an equation. For example, if you need all the benchmarks in Wood County the request would look like this; CNTY EQ 'WOOK' where County or CNTY is the item of information used to sort through the file and EQ is the relation.

Items that you may request are:

<table>
<thead>
<tr>
<th>Item</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>Benchmark Number</td>
</tr>
<tr>
<td>QQ</td>
<td>Quarter Quarter Section</td>
</tr>
<tr>
<td>Q</td>
<td>Quarter Section</td>
</tr>
<tr>
<td>SEC</td>
<td>Section</td>
</tr>
<tr>
<td>T</td>
<td>Township</td>
</tr>
<tr>
<td>R</td>
<td>Range</td>
</tr>
<tr>
<td>CNTY</td>
<td>County</td>
</tr>
<tr>
<td>AGCY</td>
<td>Establishing Agency</td>
</tr>
<tr>
<td>ORD</td>
<td>Order of Accuracy</td>
</tr>
<tr>
<td>REF</td>
<td>Project</td>
</tr>
<tr>
<td>ID</td>
<td>Field File Number</td>
</tr>
</tbody>
</table>

Allowable Relations are:

<table>
<thead>
<tr>
<th>Relation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>EQ</td>
<td>Equal To</td>
</tr>
<tr>
<td>NE</td>
<td>Not Equal To</td>
</tr>
<tr>
<td>LT</td>
<td>Less Than</td>
</tr>
<tr>
<td>GT</td>
<td>Greater Than</td>
</tr>
<tr>
<td>LE</td>
<td>Less Than or Equal To</td>
</tr>
<tr>
<td>GE</td>
<td>Greater Than or Equal To</td>
</tr>
</tbody>
</table>

The relation and items may be put together in any order, but the most common selection will usually be a legal description.
EXAMPLE: I want the closest benchmark to the mouth of Turtle Lake in Sec. 14, T3N, R15E

My request will be:

T EQ 3 AND R EQ '15E' AND SEC EQ 14

Note that all values that are alpha-numeric must be entered with quotes. Township values do not need a qualifying N for north since all townships in Wisconsin are north.

The computer responds by printing out all benchmarks within Sec. 14, T3N, R15E. A wide array of commands can be formulated to retrieve the data in almost any format you want.

**SELECTION OF DATUM PLANE**

After determining the nearest available benchmark, you must decide whether to use the benchmark or establish your own arbitrary assumed datum plane. If the work is temporary and there will be no long-term use of the information, a temporary benchmark can be used. Temporary benchmarks include nails in trees, invert or tops of culverts, marks in roadways, and, in general, any stable position likely to last the length of the project in an undisturbed position. It is a good idea to establish two benchmarks per project to ensure survival of the datum plane.

If the project is to be permanent and there is no nearby permanent benchmark, you should establish one. Figure I shows a cross-section of a properly established permanent monument. Wherever possible, it is desirable to situate the benchmark so that it protrudes about 6 inches above the ground. Excavation of the hole can be done with an auger or a post hole digger. The hole should be slightly over excavated in order to ensure that the monument can be backfilled and compacted. Backfill material should be a clean sand and gravel. The concrete used should be a six bag mix with a maximum slump of 3 to 4 inches or an equivalent dry bag mix. (See American Concrete Institute Standards.) Concrete should be compacted in lifts of no more than 12 inches during placement. The surface of the concrete should be finished to a smooth texture. Following finishing the cap should be placed so that its underside is flush with the top of the concrete.

Other acceptable permanent benchmarks are chiseled squares on dams, bridges or other highway structures, rock outcroppings or large boulders such as leaverites.

As time permits temporary benchmarks that are used for long-term projects should be converted to permanent benchmarks.

Both temporary and permanent benchmarks should be described in the field book so they can be easily relocated. Reference each benchmark with two or more ties to permanent or semi-permanent objects. The ties should be measured to the nearest tenth of a foot and should also contain a direction. It should be possible to reestablish the benchmark's position by swinging arcs from the position of the reference points to the approximate location of the monument.

**FIELD BOOK PROCEDURES**

All benchmarks established by the Department must be properly documented in a field book. Over the course of years, it may be necessary to verify your survey by reviewing the notes. It is, therefore, very important to number and index your field book so that your work can be retrieved at a later date. The Central office assigns each member of the Bureau staff a sequentially numbered book. After the book is complete, they are kept in file drawers. District field books should also be carefully numbered. To avoid being confused with existing field books, district numbers should be prefixed with the district identification, i.e., WC, SE, SD, LM, NC and NW. If
questions arise, this very simple filing system will allow for easy relocation of your work. A four-page index should be located at the front of your field book listing the project and page. Figure 2 shows a properly indexed field book.

Field files, memos and letters referencing your surveys should reference your field book number.

All surveys must be closed loops. A copy of a properly recorded level survey is shown in Figure 3. Note two items in this figure. On the right of the page in the lower half there is a page check. Every page of levels should be accompanied by a page check. Page checks are a good way to avoid arithmetic blunders. A page check should show the difference between the sum of the foresights and the sum of the backsights, excluding side shots, to be equal to the difference in elevation on that page.

The permissible closure is on the bottom of the right-hand side of the page. The closure and distance of the survey determine the accuracy of the survey. There are three levels or orders of work commonly referred to in surveying, first, second and third. First order is the most accurate, and third order is the least accurate. All of our work should meet or exceed third order standards, which is 1 part error in 3000. To accomplish this, rod readings should be taken to the nearest 0.01 foot.

To determine if your survey is within the allowable closure for third order work, first determine what the actual closure was and second determine the allowable closure. You will need to record the total distance of the survey by stadia or other methods. Allowable closure is given by the formula below:

\[
C = 0.05 \times \sqrt{M}
\]

\(C =\) Allowable closure in feet

\(M =\) Distance in miles

Alternatively the distance may be omitted in the determination of allowable closure if the sights are limited to about 300 feet. In this case allowable closure becomes:

\[
C = 0.03 \times \sqrt{N}
\]

\(C =\) Allowable closure in feet

\(N =\) The number of instrument set ups

**RECORDING THE DATA**

After you have established the benchmark, fill out a Vertical Control Station form 3500-48 and send it to the Central office with a copy of your notes. It will be assigned a benchmark number and will be incorporated into the Department's data base.

If water levels are surveyed or read from a staff gage, they should be recorded on a Water Level Data form 3500-27. Be sure to include your field book number. Water level readings should be sent to the area, district or central office as appropriate.

**REFERENCES**

For technical standards and background information, consult a technical reference (see Appendix 7).
Figure 1
DETAIL OF CONCRETE MONUMENT INSTALLATION
FOR VERTICAL CONTROL
[image missing]

Figure 2
FILLED OUT LOG BOOK
[image missing]
Appendix 5  
WATER MANAGEMENT EQUIPMENT

A. BACKGROUND

Water management field staff needs the following equipment to do their job efficiently and safety.

Each water manager need not have all items in their personal inventory but they should have ready access to all equipment. Equipment such as flow meters and dissolved oxygen meters might be borrowed from water quality staff; boats might be borrowed from fisheries management or law enforcement staff; slide projectors from service centers; stereoscopes and planimeters from forestry or water resources, etc.

This list does not include normal office furniture and equipment.

B. EQUIPMENT

<table>
<thead>
<tr>
<th>ITEM DESCRIPTION</th>
<th>PURPOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer capable of supporting ArcView</td>
<td>Essential for office work</td>
</tr>
<tr>
<td>Automatic Level and Tripod (optical or laser)</td>
<td>Needed for establishing stream and lake levels and benchmarks</td>
</tr>
<tr>
<td>Level Rod, 4 section 16-25 ft., fiberglass or similar</td>
<td>As above</td>
</tr>
<tr>
<td>Tape Measures in 1/100 ft.:</td>
<td>Needed for measuring distances</td>
</tr>
<tr>
<td>12-25 ft pocket tape</td>
<td></td>
</tr>
<tr>
<td>150-300ft fiberglass or similar tape</td>
<td></td>
</tr>
<tr>
<td>Abney Hand Level or similar</td>
<td>Needed to measure slopes, angles</td>
</tr>
<tr>
<td>Folding Engineers Rule in 1/100 ft.</td>
<td>Needed to measure distances</td>
</tr>
<tr>
<td>Field Notebooks (waterproof paper)</td>
<td>Needed to record level and surveying work; other data</td>
</tr>
<tr>
<td>Camera (35mm and digital recommended)</td>
<td>Needed to document events and violations</td>
</tr>
<tr>
<td>Binoculars</td>
<td>Used for surveillance work and field inspections</td>
</tr>
<tr>
<td>Soil Probe, Sharpshooter (trenching spade), Munsel color charts for hydric soils</td>
<td>Needed for determining soil types, depth</td>
</tr>
<tr>
<td>Hand Compass</td>
<td>Needed for field investigations, violation surveying, orienteering</td>
</tr>
<tr>
<td>Pocket Thermometer</td>
<td>Needed to measure water temperatures</td>
</tr>
<tr>
<td>Machete/Hand Ax</td>
<td>Needed for field investigations, survey work</td>
</tr>
<tr>
<td>Pick-type Hammer and small mallet (two-pound)</td>
<td>Needed to set benchmarks, test concrete on structures, dams</td>
</tr>
<tr>
<td>4-wheel drive personally assigned vehicle</td>
<td>Needed for field inspections</td>
</tr>
<tr>
<td>Calculator</td>
<td>Needed for mathematical calculations</td>
</tr>
</tbody>
</table>
Engineers and Architects Scales (triangular) Needed to measure distances on plans, maps, etc.

Drafting Kit (drawing instruments) Needed for drafting and mapping purposes

Slide Viewer Needed to view slides of events, violations

Slide Projector Needed for meetings, displays, etc.

Planimeter Needed to measure distances, areas from maps and aerial photographs

Stereoscope (Pocket) Needed to view aerial photographs in stereo

Microfiche Reader Needed to review case files, original survey maps, etc.

Tape Recorder, Cassette Needed to facilitate field inspections and dictation needs

Personal Flotation Device Personal protection

Hard Hat Personal protection

Rain Gear, both regular and with built in flotation (recommend Gore-Tex, Kool-Dri, or similar for both) Personal protection

Waders, Hipboots, Kneeboots & Hiking boots Personal protection

Snowshoes & Bindings Needed for winter field work

Briefcase, backpack and duffel bag Needed for business purposes, carrying needed materials to meetings, or field investigations.

Canoe/Kayak, Canoe Racks, Paddles Needed for navigability tests and field inspections

Boat, Oars, 20-40 hp Motor, Trailer Needed to make inspections on lakes and rivers

Stream Flow Meter Needed for determining allowable diversion rates for irrigation

Dissolved Oxygen Meter Used to monitor quality of dredge return carriage water, etc.

Field guides to aquatic plants, wildflowers, grasses, sedges, Trees, shrubs, birds, insects, amphibians, reptiles, mammals Examples: Vegetation of Wisconsin (Curtis) Michigan Flora, Vol 1 & 2 (Voss) Manual of Aquatic Plants (Fassett) Through the Looking Glass (WDNR)

Water & Wetland regulatory guidebooks, statute books Reference

Revised 08/4/00 by Simon
Appendix 6
FILING PROCEDURES

Purpose. Much time can be wasted looking for filed information. An organized filing system saves time by assuring that all material pertaining to a specific project is together. Good filing procedures enable people using the files fast access to the information they need. If files are kept in proper order when not in use, finding a file is an easy task. More people in the office can easily find needed information.

History. The first water regulatory actions were the many dams authorized by the legislature from 1836 to 1910. The Department has no formal files on these actions other than the yearly laws of Wisconsin.

The Railroad Commission (1905-1932) was authorized by Chapter 362, Laws of 1905, as the first agency responsible for water regulation matters. The Public Service Commission (1931-1967) was authorized by Chapter 183, Laws of 1931, to replace the Railroad Commission as the agency responsible for water regulation matters and to administer an expanded regulatory program. The "Kellett Reorganization Bill," Chapter 75, Laws of 1967, transferred water regulation matters to the Department of Resource Development for 1 year and then to the Department of Natural Resources. This transfer included 5 engineers, one file clerk, two secretaries and all of the records.

The Railroad Commission used two types of file numbers. WP-1, 2, 3 ... were assigned for formal cases and numbers alone were assigned to informal files.

The Public Service Commission used three types of file numbers. The 2-WP-1, 2, 3 ... were assigned to formal cases. A letter and a number were assigned for informal files (C-, D-, E-). I-WPs were assigned to complaints. No one is around to tell us why A and B were skipped at the beginning.

The Department of Resource Development/Department of Natural Resources started with three types of file numbers. The 3-WRs were assigned numerically for formal cases. Informal files receive a letter and a number (G-xxx) and H-xxx thus far). A new letter is assigned when number 9,999 is reached. Ms. Bennett, file clerk at the time, had a hang up with continuing in alphabetical order and skipped F. I-WR's were assigned to complaint files, but were later discontinued and are now assigned informal file numbers.

A point system is used in the informal filing system at the central office. Entities (county, city, village, town, company or individual) are assigned numbers on a sequential basis. Once an entity receives a number, all future correspondence with that entity regarding different matter is assigned the original number plus a point number. For example, the first correspondence with the City of Madison was assigned the number 975. The next correspondence with the city, on a different matter, was assigned 975. 1, and so on. Other examples are:

- All Department matters: H-2.xxx
- Informal complaints: H-12.xxx
- Corps of Engineers Matters not requiring a DNR permit: H-30.xxx
- DOT bridges: H-100.xxx
- FERC: H-103.xxx

There was also a point system used for dredging and sand blankets, which was discontinued when decentralization started in 1974. All dredgings, for example, were assigned a number at the beginning of each year and point numbers were assigned to each applicant.
For filing codes presently used see the section on filing codes.

Field files are established and maintained for all dams that have had a formal action. Occasionally field files exist for dams where no formal action has taken place. The file is assigned a county number along with a point number as it is established. The field file contains reports and photos taken during inspections along with a history sheet, recorded water level sheets and a benchmark summary. Negatives for photos are kept in a separate file cabinet. A record card is kept in the central office filing section indicating the original authorization along with any further orders that are issued regarding the dam.

A counterpart of the field file is the 855 file. It has the same file number after the 855 as the field file. For example 855/24.2. This file contains reports of inspections along with correspondence regarding the involved dam. The dam plans are also kept in this file. These files have been microfilmed but some also remain in hard copy.

Lake files are established for lakes not controlled by a dam, where benchmarks have been established and water levels recorded. They only receive the county number and are filed alphabetically by lake name. These files contain reports and photos of inspections, recorded water level sheets and a benchmark summary.

Field books, which contain survey field notes by central office staff, are indexed and retained in the central office and date back to 1913. See Appendix 4.

Equipment. All of the following equipment may be ordered through normal channels.

Folders and guides (dividers). The orderly appearance and efficiency of a file depend largely upon the careful preparation, use and arrangement of folders and guides in the drawers. Folders keep the papers together and in order. Guides are signposts to speed up filing and finding operations. The incorrect use of either will retard, rather than aid, these operations.

Folders - the Kraft .011 reinforced top file folder is suitable for most files. Folders come in boxed of 100, half left and half right-hand tab position.

Guides - are primarily a funding device. For example, they can separate years and/or types of authority.

Cross-Reference Sheet, Form 9500-28. Use a cross-reference sheet to keep a record of a project in two different filing locations. This may be necessary when a project needs more than one formal file number, for example, a project involving an enlargement and dredging. A cross-reference sheet can be placed where the dredging file would be and the file itself can be placed with the 30.19 files.

"Out" Cards. These are used for charging out both letters and folders. When material is removed from a file drawer, the "out" card is substituted showing who received it, the file number and the data. When the material is returned, the card is removed for future use. "Out" cards are an efficient check on responsibility for the file and eliminates the necessity for the "good memory." Check "out" cards periodically with the person who is holding the file to be sure that he/she still has it and still needs it. When a file is returned, check to be sure that no material unrelated to the file has been added. An open folder on a desk is an invitation for insertion of unrelated material.

Index Card, Form 9500-35. Maintain index cards for all formal files. As a minimum, two index cards for a single project should be prepared: the body of water and the applicant's name. Additional index cards should be prepared as needed. For a bulkhead line, cards would be prepared for the body of water, the municipality and the property owner. Develop index cards for existing formal files as soon as practicable consistent with staff
availability. The Water Regulation Section, District and Area offices can maintain index cards for informal case files at their discretion.

**Assignment-Decision Card, Form 9500-36.** Maintain assignment-decision cards for all formal files arranged according to activity. This card is an easy way to know what the next file number will be.

**Docket Card, Form 9500-36.** Districts: Maintain docket cards for all formal files. They may be discarded after the project is completed if desired.

**Filing.** Arrangement in filing cabinets. Arrange guides and folders in the file drawer starting at the front of the drawer. The sequence of the drawers should be from top to bottom of the cabinet, unless filing across proves more efficient. Whichever method is used, be consistent.

Do not crowd material in a drawer. Crowded drawers are untidy and will be a constant irritation. Crowded folders and drawers can lead to errors in filing. Leave ample working space in each drawer - at least four inches.

Formal case files should be filed numerically by file number. To avoid the loss of material, staple all material into the folder, except for large drawings and maps. Arrange informal files by county, by waterway and under the waterway alphabetically by correspondent informal file numbers can be assigned and then files arranged numerically or material can be filed by informal file codes. Formal case files and informal files should not be filed in the same drawer.

**Nonfiling material.** Do not file letters of inquiry that are answered by a publication. Keep a 'ten day' file that can be used to check mail which is returned unclaimed.

Do not mix publications or advertising catalogs with filing material. Keep these in a bookcase or library.

**Filing Codes**

A. Informal Files

Informal files do not need a formal case number, since a permit is not needed.

All correspondence should have a department file code assigned as well as any informal or formal file number.

Code - Follow the Department code schedule below, and/or assign informal file numbers. For example, informal North Central District files could be NC-1, NC-2, NC-3.

**Code** | **Primary Subject**
---|---
3500 | WATER MANAGEMENT (correspondence on matters which cannot be specifically coded)
3510 | IRRIGATION
3520 | ENFORCEMENT (obstructions, illegal actions, violations of permits, etc.)
-1 | Dams, illegal
-2 | Deposits
-3 | Fences
-4 | Irrigation
-5 | Physical alternations
-6 Structures

3530 PHYSICAL ALTERATIONS

-1 Bulkhead lines
-2 Channel changes
-3 Dredging
-4 Enlargements
-5 Sand blankets
-6 Submerged crossings
-7 Water levels
-8 Land drainage

3540 POWER

-1 Power plan siting

3550 SHORELAND AND FLOODPLAIN ZONING, GENERAL

-1 Shoreland and floodplain zoning (specific to a municipality)
-2 Plats
-3 Federal Flood Insurance Program
### 3560 STRUCTURES

- 1 Boathouses
- 2 Breakwaters
- 3 Bridges
- 4 Dams
- 5 Docks
- 6 Levees
- 7 Piers
- 8 Fish cribs
- 9 Shoreland protective structures

### 3580 GREAT LAKE SHORELINE MANAGEMENT

- 1 Coastal management
  - 1 Shore erosion
  - 2 Access to water
  - 3 Fisheries - wildlife
  - 4 Coastal Management Council
  - 5 Contracts/agreew,-nts
  - 6 District liaison
- 2 Small craft harbor
- 3 Shore damage

- 2 U.S. Corps of Engineers
- 3 Contractor
- 4 Great Lakes level regulation
  - 1 Reports
  - 5 Training and assistance program

### 3590 LOWER ST. CROIX RIVER (PROTECTION ACT)
B. Formal Case Files

Formal case files are generated as a part of the permit process in the water regulation program.

**Coding** - Assign a formal activity number according to the coding schedule below when an application is complete.

- **Southern District**: 3-SD- (year) - (activity/number in that year)
- **Southeast District**: 3-SE- (year) - (activity/number in that year)
- **Lake Michigan District**: 3-LM- (year) - (activity/number in that year)
- **North Central District**: 3-NC- (year) - (activity/number in that year)
- **Northwest District**: 3-NW- (year) - (activity/number in that year)
- **West Central District**: 3-WC- (year) - (activity/number in that year)

**Numbers** - Each calendar year the numerical sequence shall revert to 01 and proceed forward.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Example of detailed coding:</th>
</tr>
</thead>
<tbody>
<tr>
<td>0XX - Dredging</td>
<td>District: Southern</td>
</tr>
<tr>
<td>1XX - Bulkhead lines</td>
<td>Date: January 1, 1982</td>
</tr>
<tr>
<td>2XX - Sand blankets</td>
<td>Activity: Sand blanket</td>
</tr>
<tr>
<td>3XX - Diversions</td>
<td>Coding: 3-SD-82-201</td>
</tr>
<tr>
<td>4XX - Stream straightening</td>
<td></td>
</tr>
<tr>
<td>5XX - Ponds, enlargement, grading</td>
<td></td>
</tr>
<tr>
<td>6XX - Bridges</td>
<td></td>
</tr>
<tr>
<td>7XX - Structures</td>
<td></td>
</tr>
<tr>
<td>8XX - Dams</td>
<td></td>
</tr>
<tr>
<td>9XX - Enforcement</td>
<td></td>
</tr>
</tbody>
</table>

At the discretion of the district, the filing code number may be further coded to show the area:

Example:

- **District**: Northwest
- **Date**: January 1, 1982
- **Activity**: Sand blanket
- **Area**: Brule
- **Coding**: 3-NW-82-2101 (District - year - activity/area number/number in that year)

**File Folder Preparation**

Applicant's name  3-SD-82-201
3530-5  Sand Blankets

**Projects Requiring More Than One Type of Permit.** When a project requires more than one type of permit, each activity receives its own formal activity number. All permits should be filed in one formal case file folder, with cross references in the other formal case files.

**Microfilming.** Formal case files are retained in hard form for a period of five years. If the file is no longer active after five years, it is microfilmed.
District case files are forwarded to the Water Regulation Section. The district file and section file are combined into one file and purged before microfilming.

The security copy of filmed material is retained at the State Historical Society. Hard copy can be destroyed according to authority from the State Committee on Public Records. Copies of formal case files are retained in the Water Regulation Section District Office and Area Office. Informal material of the water regulation section is retained in the section. Hard copy of bulkhead line maps and ordinances, which have not always had formal case files, are forwarded to the appropriate district office.

**Authority Index.** The Authority Index is a listing of permits issued under the Water Regulation program. At the present time this is incomplete as the old informal approvals for dams on nonnavigable streams and bulkhead lines are not listed. They will be added as time permits. Also to be added will be the dams which were authorized under the laws before the existence of the Railroad Commission. The file number is read as is for permits since 1977. Before that only the first and fourth parts are read. For example 2WP-SD-58-01264 is File 2-WP-1264. The extra numbers are needed for the computer to accept them.

1380I
DATE: June 30, 2000
FILE REF: Appendix 6 - Water Regulation Handbook

TO: Water Regulation Guidebook holders

FROM: Susan Sylvester, AD

SUBJECT: Entry of Decisions in Waterway-Wetland Permit Database

This memo establishes statewide procedures to be used beginning July 1, 2000 to maintain data on waterway and wetland permits and approvals. Please insert the following pages in Appendix 6 of your Water Regulation Guidebook.

The format of this information is intended to begin the transition to a format that can be electronically maintained and distributed for ultimate incorporation into the Department-wide handbook system.
Entry of Decisions in Waterway-Wetland Permit Database

BACKGROUND:
In addition to day-to-day work tracking, consistent data on our waterway and wetland decisions can be used to analyze local, regional and statewide trends and impacts to waterways for measuring accomplishments and in basinwide water resource planning. You will be able to sort the data in both pre-programmed routine ways as well as special ways needed for workload analysis or program evaluation. With the increased computer capability of our Conservation

Word re-programming now underway will make it as easy to enter a decision as to type a letter. With the Access-Arcview link being programmed now, you will be able to enter the project location by pointing your cursor to a spot on the electronic copy of the topographic map. Once debugging and documentation are complete, the data system can be made available to any staff person specifically assigned to routinely make decisions in your region (e.g., service center staff who process short forms).

PROCEDURES:

Data to be Entered
All of the following actions are formal and must be entered into the permit database:
1. Permits or orders issued under chapter 30 or 31, both long and short forms
2. Manual code approvals
3. Water quality certifications for wetlands under s. 281.15, both individual certifications and courtesy letters
4. Natural waterbody permits under 26.733 (These decisions will be entered centrally until further notice - field staff provide an electronic or paper copy of all decisions to Dan Helsel, FH/3.)

Data Entry Protocol
• The waterway/wetland data system uses two types of docket numbers, one for formal actions and one for informal actions.
• Each activity or aspect of a project on a single site requiring authorization by statute receives a separate docket number.
• Extensions in the time of the permit use the original docket number.
• Project modifications that trigger the equivalent of a new review should receive a new docket number.
• A common set of activity names (with associated codes) is needed in order to sort the data easily. The current list of activities is attached and is in your database. The Bureau of Fisheries and Habitat will solicit changes to the list every two years. Requested changes may be sent to the bureau file manager through your regional aquatic habitat expert anytime.
• Entry of informal actions is at the discretion of each region - tracking must be consistent on a regional basis. Regions should develop handbook supplements for their informal tracking in consultation with the bureau. Some informal activity names and codes have been set up for decisions that were commonly tracked informally. Use the activity name that the decision being entered fits under. Use the comment field to provide a more detailed description of activities where specified in the activity code list and elsewhere if useful- we can use the words in the comment field as a search tool.
FORMAL ACTIVITY CODES

Formal actions are written decisions made under specific statutory authorities in response to an application or petition. A common set of names is needed in order to sort the data easily. The list below shows the level of sorting we will do. The database's look-up table will include historic as well as current names so that no matter which you type in, the proper activity name and code will show up in the data and documents. The list does not separate every conceivable type of action (e.g., water trampoline, stream barb) - the sheer variety of activities precludes this. The list generally maintains codes for activities that were tracked historically so that the legacy data can be analyzed easily. A few activities were further broken down to better track key activities (e.g., shore stabilization for structures other than riprap or seawalls; and infrastructure, recreational and habitat replacing miscellaneous structures, for structures not specifically named). The comment field can (and in a few categories is specifically recommended) be used to further describe activities, including the purpose and any other key words that can help in future searches.

<table>
<thead>
<tr>
<th>CATEGORY or HISTORIC NAME(S)</th>
<th>ACTIVITY</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulkhead line</td>
<td>Bridge, clear span short form</td>
<td>30.123A</td>
</tr>
<tr>
<td></td>
<td>Bridge &lt; 35</td>
<td>30.123B</td>
</tr>
<tr>
<td></td>
<td>Bridge &gt; 35</td>
<td>30.123C</td>
</tr>
<tr>
<td></td>
<td>Culvert &lt; 35 feet</td>
<td>30.123D</td>
</tr>
<tr>
<td></td>
<td>Culvert &gt; 35 feet</td>
<td>30.123E</td>
</tr>
<tr>
<td></td>
<td>Changing stream course</td>
<td>30.195</td>
</tr>
<tr>
<td>Bridges and culverts</td>
<td>Standard unconnected waterway</td>
<td>30.19A</td>
</tr>
<tr>
<td></td>
<td>Unconnected waterway</td>
<td>30.19F</td>
</tr>
<tr>
<td></td>
<td>Ultimately connected waterway</td>
<td>30.19B</td>
</tr>
<tr>
<td></td>
<td>Connected enlargement</td>
<td>30.19C</td>
</tr>
<tr>
<td>Constructions and waterways</td>
<td>Dam abandonment</td>
<td>31.185A</td>
</tr>
<tr>
<td></td>
<td>Dam alteration</td>
<td>30.185C</td>
</tr>
<tr>
<td></td>
<td>Dam construct/operate</td>
<td>31.06</td>
</tr>
<tr>
<td></td>
<td>Dam ordered alteration</td>
<td>31.18A</td>
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<tr>
<td></td>
<td>Dam raise or enlarge</td>
<td>31.13</td>
</tr>
<tr>
<td></td>
<td>Dam transfer of ownership</td>
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</tr>
<tr>
<td></td>
<td>Dam plan approval</td>
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<td>Dam plan approval - nonnavigable stream</td>
<td>31.33</td>
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<td>Dam drawdown</td>
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<td>Diversion</td>
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<tr>
<td></td>
<td>Dredging - ag drainage</td>
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<tr>
<td></td>
<td>Dredging - utility installation</td>
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<td>Enclosure</td>
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<td>Grading</td>
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<td>Jurisdictional declaration (227.42 process)</td>
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<td>Nonmetallic mining</td>
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<td>30.19E</td>
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<td>CODE</td>
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<td>Obstruction</td>
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<tr>
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<td>Pier</td>
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<tr>
<td></td>
<td>Wharf</td>
<td>30.12A</td>
</tr>
<tr>
<td></td>
<td>Shore stabilization (use comment field)</td>
<td>30.12B</td>
</tr>
<tr>
<td></td>
<td>Standard riprap</td>
<td>30.12C</td>
</tr>
<tr>
<td></td>
<td>Seawall</td>
<td>30.12D</td>
</tr>
<tr>
<td></td>
<td>Seawall</td>
<td>30.12D</td>
</tr>
<tr>
<td></td>
<td>Standard fish crib</td>
<td>30.12E</td>
</tr>
<tr>
<td></td>
<td>Pea gravel</td>
<td>30.12F</td>
</tr>
<tr>
<td></td>
<td>Pea gravel</td>
<td>30.12F</td>
</tr>
<tr>
<td></td>
<td>Standard ford</td>
<td>30.12G</td>
</tr>
<tr>
<td></td>
<td>Standard nesting platform</td>
<td>30.12H</td>
</tr>
<tr>
<td></td>
<td>Standard boat ramp</td>
<td>30.12J</td>
</tr>
<tr>
<td></td>
<td>Barge fleeting site</td>
<td>30.12L</td>
</tr>
<tr>
<td></td>
<td>Water ski structure</td>
<td>30.12M</td>
</tr>
<tr>
<td></td>
<td>Recreational structure (use comment field)</td>
<td>30.12P</td>
</tr>
<tr>
<td></td>
<td>Standard dry hydrant</td>
<td>30.12Q</td>
</tr>
<tr>
<td></td>
<td>Standard piling</td>
<td>30.12R</td>
</tr>
<tr>
<td></td>
<td>Fish/wildlife habitat structure(use comment field)</td>
<td>30.12S</td>
</tr>
<tr>
<td></td>
<td>Infrastructure (use comment field)</td>
<td>30.12T</td>
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<tr>
<td></td>
<td>Infrastructure (use comment field)</td>
<td>30.12T</td>
</tr>
<tr>
<td></td>
<td>Wetland water quality certification</td>
<td>401</td>
</tr>
</tbody>
</table>
Appendix 7
REFERENCE MATERIALS

Reference materials can be helpful in evaluating proposed projects. They can provide the technical information used for day-to-day administration of water regulations. The materials listed are only some of the helpful references. The materials on the list are not required but are some that have been found useful in the past. Ultimately, each individual should develop a reference library that is the most useful and meaningful to him.

LAWS, MANUALS, CODES

- Wisconsin Department of Natural Resources. Wisconsin Natural Resources Laws, Publication 8-1020
- Wisconsin Department of Natural Resources. Water Regulation Handbook
- Wisconsin Department of Natural Resources. Floodplain-Shoreland Zoning Administration Manual
- Department of Natural Resources Administrative Codes
- Department of Natural Resources Manual Codes

MAPS, SURVEYS, DATA CATALOGS

- United States Geological Survey Topographic Quadrangle Maps - 7'h' and 15'
- National Oceanic and Atmospheric Administration, National Ocean Survey, Lake Survey Charts
- County Plat Maps
- Wisconsin Department of Natural Resources County Wetland Inventory Maps
- State Cartographer's Office County Cartographic Catalog
- United States Department of Agriculture, Soil Conservation Service, County Soil Surveys
- United States Geological Survey, Water Resources Data for Wisconsin - Water Year (Published Yearly)
- United States Geological Survey, Benchmark List for Wisconsin
- National Geodetic Survey, Benchmark List for Wisconsin (Wisconsin Lines)
- Wisconsin Department of Natural Resources, County Surface Water Resource Inventories
- Wisconsin Department of Natural Resources, Lake Use Reports
- Wisconsin Department of Natural Resources, Bureau of Fish Management, Wisconsin Trout Streams, Publication 6-3600(80)
- Wisconsin Department of Natural Resources, Bureau of Fish Management, Wisconsin Lakes, Publication 7-3600(81)
- Wisconsin Department of Natural Resources, *Wisconsin Trout Lakes*, Publication 3-3600(73)

- Wisconsin Department of Natural Resources *County Natural and Scientific Area Inventory* (computer listing and file)


- Wisconsin Department of Natural Resources, Bureau of Water Regulation and Zoning *Dam Inventory* (Computer Printout)

- Wisconsin Department of Natural Resources, Bureau of Water Regulation and Zoning, *Benchmark Inventory* (Computer data file)

- Wisconsin Department of Natural Resources, Bureau of Water Regulation and Zoning, *Flood Data Repository* (Computer file)

**BOOKS**


Appendix 8
MANAGEMENT SYSTEM FOR WATER REGULATION AND ZONING
PROGRAM MATERIALS

Since 1787 when the Northwest Ordinance declared the need for protecting Wisconsin's waterways, innumerable legislators, judges and administrators have been refining the standards and procedures for water management. New forms of guidance were needed to ensure fair and uniform application of the myriad legislative mandates, legal precedents and procedural statements. More people needed guidance and interpretation as water uses diversified and water regulation and zoning programs decentralized.

Program materials now include statutes, administrative codes, manual codes, handbooks, brochures and application forms.

The goals of "managing" program materials are:

- to keep materials accurate and up-to-date through timely and thorough reviews
- to minimize the total number of documents and the variety of forms of information
- to systematically address needs for guidance and incorporate new ideas for materials
- to develop and maintain distribution of program materials to appropriate users

This memo contains:

- steps in the bureau review process requests for new program materials
- steps in the departmentwide review process
- descriptions of the various forms of guidance

BUREAU REVIEW OF EXISTING MATERIALS

In general
Basically, the review system provides a reminder that a document needs to be reviewed; assigns responsibility for the actual work and monitors progress until the document is revised as appropriate and distributed.

Actual work will vary from writing new rules in response to requests, to incorporating program guidance memos into the appropriate form(s), to correcting misleading graphics in public information brochures.

The bureau review system will apply to all bureau documents. Those which are reviewed under the Department directives system will, after bureau review, be subject to directive system procedure.

The timing and frequency of review for each of these forms of guidance are listed below:
<table>
<thead>
<tr>
<th>Form</th>
<th>Timing</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statutes</td>
<td>January-February</td>
<td>biennial - even years</td>
</tr>
<tr>
<td>Administrative Rules</td>
<td>November</td>
<td>biennial* even # -- even years odd # -- odd years</td>
</tr>
<tr>
<td>Manual Codes*</td>
<td>BY DEPARTMENT SYSTEM</td>
<td>based on time of biennial adoption</td>
</tr>
<tr>
<td>Handbook*</td>
<td>BY DEPARTMENT SYSTEM</td>
<td>January-February biennial 1/2 each year</td>
</tr>
<tr>
<td>Public Info. Materials</td>
<td>December</td>
<td>yearly</td>
</tr>
<tr>
<td>Application Forms</td>
<td>March</td>
<td>yearly</td>
</tr>
<tr>
<td>Program Guidance</td>
<td>January</td>
<td>yearly</td>
</tr>
</tbody>
</table>

*Indicates review and distribution control by the Department directives system.

**Steps in review**

I) Reminder

The basis for the reminder is a monthly calendar indicating when each form of guidance is to be reviewed (Attachment 1).

**TRAINING OFFICER** - 5  
(Coordinator)

**PROGRAM ASSISTANT**

1. Checks the calendar each month before the Bureau Management meeting
2. Notifies training officer of:  
   a. Materials to be reviewed in the following month  
   b. All deadlines especially those that have not been met
3. Requests comments by memo from all names on distribution list of each document coming up for review
4. Request that assignee submit delinquent materials by an agreed date
5. Records assignments and deadlines
6. Notifies person who made initial request of new deadline

II) Assignment

**SECTION CHIEF** -

1. With training officer discusses appropriate response to request.
2. Section chief, as part of work planning process or mid-year request, assigns one staff member to review each document (or group of related documents) and sets deadline for completion of review with staff member. Section chief advises training officer of assignment details.

3. Resolves or extends unmet deadlines.

4. Reports assignments deadlines, and revisions to program assistant.

III) Review

Reviewer -

1. Considers the following questions:
   - Is the information still necessary for anyone to have?
   - Who needs to have this information? Does the current form of the information reach those who need it? See form descriptions in this memo.
   - Is any of this information presented in another form to the same audience? Could this - or another - document be eliminated?

2. If the document might be eliminated:
   a. With section chief and training officer, discuss reasons for elimination of or alternative forms for the information

   Grounds for eliminating a document:
   - Information is no longer needed by program staff.
   - Information is presented in another form to the same audience.
   - Document could be produced/distributed more efficiently in another form.

   b. If decision is to eliminate, send a memo to distribution list saying that unless objections are received within two weeks, the document will be eliminated. Explain reasons for elimination or where information will subsequently appear. If no objections are received, notify distribution list of final decision to eliminate.

   c. If information in an eliminated document is to appear in other existing documents, indicate the pieces of information to be put into each document. Put copies of marked up document into training officer's file under each particular document.

   d. If the form of the entire document is to be changed, draft and finalize the new document according to the next section of this memo.

IV) Revision

Revision takes place only if:

- document is needed in its current form
- form of information needs to be changed entirely
- there is significant objection to eliminating a document but changes are needed if it is to be retained content is outdated or inaccurate

Reviewer -

1. Drafts revised document
a. incorporate comments from training officer's file
b. check the list of Program Guidance Memos for possible information to add
c. edit for clarity and conciseness using "Ready Rules of Regulator's Rhetoric" (Attachment 3)
d. consult description of forms in this memo. Audience section should determine the appropriate vocabulary and level of detail.

2. Coordinate outside review of draft
   a. with section chief and training officer, decide if and to what extent outside review is necessary
   b. select list of reviewers if needed
   c. send draft to reviewers, requesting comments and setting comment deadline
   d. incorporate valid comments; comments received too late for consideration should be put in training officer's file under that document.

3. Deliver final typed version to program assistant for distribution.

PROGRAM ASSISTANT -

1. Distributes document

2. Records distribution date
YOUR IDEAS FOR NEW PROGRAM MATERIALS

An established process for turning ideas into program guidance and other materials will enable:

- monitoring of progress on ideas
- development of materials in proper form so that they reach the audience that needs them.

I) Request for program materials

YOU -

Send completed materials request form to program assistant (suggested form, attachment 4)

PROGRAM ASSISTANT -

Logs in materials request and sends to training officer (suggested log sheet, attachment 5).

TRAINING OFFICER -

1. Puts request on agenda of next section chiefs' meeting.
2. Reviews request with section chief to determine:
   - Who needs the requested information? Will the suggested form reach this audience?
   - Is the information requested presented in one or more other forms?
3. After above questions are answered, inform program assistant of assignment and due date.

II) Preparation of new program materials

Reviewer -

1. Drafts text of new document
2. Asks selected reviewers for comments, setting deadlines for their return
3. Incorporates valid comments; file comments received too late for consideration in training officer Is comment file
4. Advise reviewers of action taken on their comments and reasons why
5. Arranges for illustrations with I&E if needed
6. Section chief and Bureau Director approve final version
7. Delivers final typed version and original request form to program assistant for copying and distribution or to I&E for production and distribution
DEPARTMENT SYSTEM FOR REVIEW

The Office of Planning and Analysis (OPA) has an established directives system for updating administrative and manual codes and handbooks, documents that are used by more than one program.

OPA sends reminders to the appropriate bureaus two years after initial distribution of each document and biennially after that. The bureaus work together to complete the revisions. OPA prints and distributes the revised document.

Bureau review of the handbook and manual codes in response to OPA reminders should be done according to the bureau review procedures (I through III). There are a few specific steps for coordination with the OPA system:

PROGRAM ASSISTANT -
Notifies OPA of name of review coordinator and deadline for review.

Reviewer -
In making revisions, requests comments and coordinates changes with reviewers in other bureaus and with district staff.
The seven forms of permanent program material are:

1) statutes
2) administrative codes
3) handbook
4) manual codes
5) public information
6) application permit approval and program management forms
7) Training materials

All statements or explanations of program policies or procedures should end up as one of these seven forms. The forms of information should be limited so that staff and others can be sure that they have complete program information.

Program guidance memos, Attorney General and Bureau of Legal Services opinions, official letters and similar statements should be considered temporary forms for information. If the information in them is of long-term value it should be put into one of the seven forms.

The forms of program material are distinguished by:

1) The "force" or authority they carry
2) The audience they are intended for
3) Format
4) Content

Audience is perhaps the most important feature for program staff who are proposing and producing materials. Whether information is needed by the public, water regulation and zoning staff or other agency staff is an important determinant of the appropriate form for the information. The audience should set the level of technical detail and vocabulary, depending on its familiarity with the program.
FORMS OF PROGRAM MATERIALS

Statutes

Statutes are laws. If unresolved, violations of water regulations are punishable by fines, imprisonment or forfeiture.

All citizens are expected to understand and obey the laws. Copies of the state statutes are available in most public libraries.

Laws are written in a very specific format. Through the years, the water laws have been reorganized and revised many times. Each individual provision is indicated by a number and/or a letter. Specific phrases or statements have particular legal importance.

The content of statutes varies from statements of need or purpose and delegation of authority to general prohibition or specific conditions or activities.

Administrative Codes

Administrative rules are adopted by agencies to govern the enforcement or administration of statutes. They have the same force as the laws they refer to.

As with laws, all staff and citizens are expected to understand and comply with administrative rules. Anyone may receive copies of the Administrative Register (updating mechanism); copies of the Wisconsin Administrative Code (which includes all individual rules) are available in most public libraries.

The format for administrative rules is specifically described in Section 227.024, Wisconsin Statutes. In particular, the format section calls for the use of "plain language which can be easily understood to the greatest extent possible." The Revisor of Statutes and the Legislative Council have published the "Administrative Rules Procedure Manual," to provide further detail for rule development.

Like laws, the content of administrative rules varies widely, from interpretations of statutes to descriptions of significant internal procedures.

Manual Codes

Manual codes are continuing instructions from the Secretary to employees on policy or procedures. They are not binding on the public. Procedures and other requirements which directly and significantly affect the public are required to be in the statutes or administrative code.

Manual codes are generally used by Department staff. The manual contains information needed by more than one bureau or district.

The format for manual codes is in Manual Code 1311. Especially important is the requirement that each manual code include a statement of purpose.

Manual codes contain a variety of information ranging from directions on implementing statutes, rules or other directives to the history, explanation and procedures for statutory programs and for special water resource situations.
Handbooks

Handbooks are instructions to program staff. As part of the directives (manual code) system, they carry the same weight as manual codes.

Handbooks are primarily used by program staff but may be needed by staff of other programs for purposes of coordination. Some parts of the information may be widely used - even copied for public use - by people involved with water management activities.

The format for handbook chapters is found at the front of the Water Management Handbook.

The handbook chapters contain explanations of basic program concepts which range from description of procedures to numerical guidelines to model ordinances.

Public Information Materials

Public information materials include brochures, fact sheets, booklets, audiovisual materials (slides, films, videotapes) and visual displays.

Public information materials, of course, are intended for the public. Any of the individual materials may be a person's first exposure to water management and regulations.

The format for public information materials may be anything that arouses people's curiosity or concern and holds their attention. The format should ensure that important information is easily recognized. Vocabulary and level of technical detail should be understandable to average high school students (remember that newspapers are aimed at an 8th grade-level audience).

The contents of public information materials varies widely. In general, explanation of a water regulatory program might include: statement of purpose/rationale (environmental, economic and historical information); individual activities affected; specific requirements to comply with statute or rules and contacts for further information. Different aspects may be emphasized to reach special segments of the public, such as local administrators, contractors, realtors or outdoor groups.

Program Guidance Memoranda

These are written policy guidance to assist staff in the interpretation and implementation of statutes, rules, or legal opinions and decisions. They generally are written in response to significant questions or to accompany new statutes or rules.

Program guidance memoranda are not authority for proceeding in a certain way. Instead, they help to explain other program materials which are the authority for our actions. These memoranda are a temporary means to let staff know how to operate until the next chance to incorporate their contents into more permanent form in handbooks, manual codes, or rules.

Application Permit, Approval and Program Management Forms

Application forms are used to collect information on proposed activities. The forms are used by: (1) members of the public who want to do projects in or near waterways. For some of them, this may be their first exposure to water regulations and government procedures; (2) DNR staff who must
determine whether the proposal complies with the law; (3) other federal, state and local staff who must determine whether proposals comply with their regulations and (4) members of the public who want to determine what impact proposed projects may have on them.

Format generally states the information needed and provides space for response. The form of response desired (i.e., drawing with measurements, descriptions, quantity in particular units) should be explained.

The content of forms may vary with the information needed. In general, they request information about the person proposing the project; about the project purpose, location and specifications. The form itself should list contacts for further information and the addresses) to which the completed form should be delivered.

**Permit and Approval Forms**

Permit and approval forms should emphasize the conditions attached to the authority. The legal requirements for findings of fact and conclusions of law can be satisfied by referencing their availability in the issued authority. Both of these components would be retained and available at the issuing office. This approach will further emphasize the conditions.

**Program Management Forms**

Program management forms included in this document will be used to provide instructions to program staff about the generation of program guidance and the timely review and maintenance of all forms of programs materials.
Attachment 1

**MATERIALS REVIEW SCHEDULE**

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<th>March</th>
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<td>1st half - odd years</td>
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<td>all-yearly</td>
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<td>2nd half - even years</td>
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Attachment 2

PROGRAM MATERIALS REVIEW LOG

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<th>MEMO TO DISTR. LIST (date)</th>
<th>REVIEW COORDINATOR</th>
<th>DEADLINE DATE</th>
<th>FINAL DOCUMENT REC'D (date)</th>
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Waterway and Wetland Handbook - Appendices
REQUEST FOR PROGRAM MATERIALS

DATE OF REQUEST ____________________________

FORM OF MATERIALS DESIRED __________________________________________
(See description of forms in Materials Management System)

SUBJECT OF DESIRED MATERIALS ______________________________________
(e.g. Interpretation of statute; program terms or procedures; etc.)

SPECIFIC QUESTIONS TO BE RESOLVED/INFORMATION PRESENTED
(Attach additional sheet if necessary)

Person Requesting Material

Name: ______________________________

Address: ____________________________

FOR BUREAU USE:

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### PROGRAM MATERIALS REQUEST LOG

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Date: March 7, 1983 File Ref: 3550

To: Bureau Staff

From: Ed Brick

Subject: Program Materials Management System (PMMS)

Attached is a copy of a flow chart outlining the procedural steps of the PMMS which Joe King discussed at the recent Water Regulation and Floodplain/Shoreland staff meetings. You will note that one chart deals with existing program materials, while the second chart describes procedures for new program guidance.

Also attached is the new form that field staff could use when requesting guidance, forms, etc., from the Bureau. Once the form has been received by the Program Development & Evaluation (PD&E) Section, I will discuss the request with the appropriate Section Chief (in some cases, I'll confer with both Larry and Scott).

Once a deadline for completion of the request has been established by the Section Chief (S.C.), it will be the responsibility of the drafter to keep the S.C. advised of the progress in meeting the deadline.

Finally, we are attaching a copy of the glossary letter that we will use when issuing new or existing program guidance to the field.

Please insert the flow charts, glossary letter and PMMS Request Form in Appendix 8 of the Water Regulation Handbook. Let me know if you have any further questions concerning this material.

EB:JK:maq

cc: Kathy Curtner ADM/5

Attachs.
[not included: two forms, two flow charts]
Appendix 9
AUDIOVISUAL MATERIALS AVAILABLE FROM THE
BUREAU OF WATER REGULATION AND ZONING

A. Films

**ECOLOGY OF THE POND**

7 1/2 Minutes

This short film has a very simple narrative and lots of spectacular animal action. It does not present any issues directly.

The film could be used as an introduction to a discussion of the importance of ponds, pond creation, activities that affect ponds, what our program does for/with ponds. Good for any audience.

**THE CREEK**

26 Minutes

This semi-technical film explains the biological workings of a stream. Vocabulary includes: dissolved oxygen, siltation, Latin names of organisms. It describes how a citizen or school group can "save" a stream. Although it concentrates on pollution problems, it does explain the hydrology of a stream (e.g. watershed drainage system, role of a marsh).

This film would be the most useful for environmental groups. You could use it as a lead into discussion of how our programs protect waterways (consider erosion and siltation, drainage, etc.). Good for high school age and up.

**THE LAST RIVER**

30 Minutes

Remember the little streams you played in as a child? Northwoods conservation sage, Sigurd Olson and a young boy reminisces during a trip down the Wolf River. In the process, they explain man's attraction to waterways and the need for saving them - from wild river preservation to shoreline and watershed protection; with a little northwoods philosophy thrown in.

This is an old film so the photography is not as beautiful as it once was. The film is appropriate for outdoor groups including sportsmen, conservationists, outing clubs and even tourism operators near wild areas. It instills a real pride in the water resources of Wisconsin. This could be used as a lead into brief discussion of tradition of wise use of water resources through water regulations. High school age and up would understand this presentation.

**SHORELAND DEVELOPMENT: A NEW APPROACH**

About 20 Minutes - two copies

Produced by the Inland Lake Demonstration Project, this film gives an excellent overview into the development pressures working on Wisconsin's lakes. It explains the economic importance of development as well as the
headaches experienced by owners, developers and local people. Some of the pitfalls - grading, filling, boat licenses - are shown. Finally, the film traces the developer's planning process.

This film would be ideal as a topic for discussion itself (critique) or as a lead into some points on shoreland zoning, water regulations affecting lake development (how they promote sound practices, protect recreational opportunities, etc. Local officials, realtors, contractors, property owners associations are possible audiences.

**CRY OF THE MARSH**

About 10 Minutes

This film uses no narration, just music and striking photography to tell a tragic tale. From shots of a marsh, it moves to big dredges and bulldozers, stranded fingerlings, fleeing deer and frying (literally) chicks in a nest.

Obviously, this film is very strident in its wetlands protection message. Show it to audiences you really want to startle.

To Use the Films:

Films will be kept in the Central office by Elly Lawry. Call her one week in advance of when you will need the film. They will be sent by field mail.

Please return films within two weeks of when you get them. Let Elly know if you want to keep a film longer.

Lists of films available from the UW Bureau of Audio-Visual Instruction and films assigned to DNR districts and bureaus are attached. BAVI ordering instructions are included. Contact the individual offices to ask about borrowing films.

7/82

2328H/PERM
GUIDANCE PURPOSE AND DISCLAIMER

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance cannot be relied upon and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes, common law and administrative rules to the relevant facts.

This file is an electronic version of a chapter of the Waterway and Wetland Handbook. This document was scanned from the master handbook chapter kept at the Bureau of Fisheries and Habitat Protection central office in Madison. All effort was made to ensure this scanned electronic copy is an actual copy of the hardcopy document. Due to the electronic scanning process, there may be rare instances of typographical errors, omissions or improperly formatted pages. Please refer to the master handbook if accurate transcription is required.

A. Statement of Purpose and Need

1. Introduction to Water Regulation Authorities

Most of the statutory requirements for the Water Regulation Program are contained in Chapters 30 and 31, Wisconsin Statutes. These chapters are a noncomprehensive set of instructions guiding the use and protection of the public interest in Wisconsin's surface waters. Other important instructions are contained in Chapters 59, 87, 88 and 144, Wisconsin Statutes.

Chapters 30 and 31 represent well over 200 years of evolution of the trust doctrine, uses of the trust available to individuals, corporations and municipalities and reasonable protection of the trust by the state (now DNR) as trustee on behalf of the public.

The evolution has been shaped by legislative action and court review of basic ordinances and constitutions. Our everyday interpretation of present statutory instructions reflects the interplay between the legislative process and the judicial process. We operate in the tension zone between the legislature's perception of public opinion and the Supreme Court's definition of public interest in Wisconsin's surface waters.

Court decisions have been remarkably consistent in urging vigorous protection of the trust. A comparison between the definition of trust in the Muench and DeGaynor decisions shows the increasing specificity.

Chapters 30 and 31 utilize "loose" construction, relying on the administrative agency to apply the statute to each fact situation. William Torkelson, former Chief Counsel for the Public Service Commission, quoted a Supreme Court statement to suggest what he believed was required to make the system work, "we must remember that the machinery of government would not work if it were not allowed a little play in its joints."
Administrative rules are used to detail statutory meaning. They clarify for the public and the judiciary how the agency administers the law. They cannot create law beyond the authority provided in the statutes. They do have the effect of law. Presently there is a great debate regarding the need for administrative rules. The water regulation program functioned for 60 years without any administrative rules. That experience is significant in several ways. It was consistent with the tradition of generally worded statutes and allowed staff to fit the statutes to each fact situation encountered. It was also possible because until recently the program was administered by relatively few people located in one office in Madison.

Now we are confronted with both a clamor for additional rules to more precisely describe the laws we administer at the same time that we are confronted with a great public resistance to more rules. No doubt additional administrative rules will be adopted in the future for the water regulation program. Regardless of the number of rules that are adopted, there will still be a great need for the exercise of reasonable judgment by all of the staff involved in the administration of the water regulation program.

2. Wisconsin’s Public Trust

Wisconsin is a state of magnificent variations. Several distinct physiographic provinces results in a distinguishable set of natural features including topography, geology, soils, vegetation and animal diversity which justify differences in decisions resulting from the application of the same Statute in different physiographic provinces.

Of a lesser, but still significant nature, is the climatic variation that exists in Wisconsin. Duration of seasons, such as winter length in the north vs. the southeast, variation in precipitation amounts, local seasonal influences such as occur near the Great Lakes, all influence decisions made in this program.

Population distribution and economic activity are similarly highly variable in Wisconsin. We are confronted with contrast in population density ranging from metropolitan to truly wilderness conditions. The economic activities which occur in Wisconsin span the gamut of opportunity. These factors also influence decisions made in this program.

The statutes which we administer have been adopted over the years since the mid-1800’s. They reflect the varying style of statutory language that has been used during the period. Consequently, we are obliged to relate to a widely varied system of procedure, public notification, hearing and statutory standards as we administer this program.

The water regulation program is probably the most decentralized program in the department. This means that program staff working in the field are required to exercise individual judgment daily. This situation gives rise to the opportunity for divergent judgment decisions and potential nonuniformity in program application. Constant vigil must be exercised to minimize this potential.

Water regulation's complexity and decentralization imposes a great need for judgment on those people involved in the day-to-day administration of the program. To the fullest extent possible we must strive to apply these statutory instructions and guidelines in as uniform and consistent a manner as practicable given the complexity of our mission.

3. Training for Water Regulation Personnel

Training, audits, standard forms, policy and procedure statements (manual codes), administrative
rules, program review and consultation between field and section staff are among the tools used to achieve uniform and consistent regulation.

Training materials are an important and commonly used component. The procedural and technical training information must be used in a flexible manner. The need for flexibility arises from the variations which we encounter in administration of this program throughout Wisconsin. The training materials are not standards. Standards must be adopted either in statutes or in administrative rules.

Training is a major factor in achieving the goal of uniform and consistent application of the water regulation program. Training will take many forms, both formal and informal. We all need to be alert to items which we encounter which are of a program-wide nature and which should be channeled from the discoverer to the bureau for later dissemination throughout the program. Training topics will include technical information, new legislation, new court decisions and new or changed intergovernmental relationships which bear on the administration of the water regulation program.

B. Development of the Water Regulation Program

The rules of law pertaining to navigable water in Wisconsin go back to the early history of our country.

When the thirteen American colonies declared their independence, they became independent sovereign states. As such, they owned the waters and their beds within their respective boundaries and could make whatever rules they desired concerning the waters and their beds subject to common law and general usage.

1. Northwest Ordinance of 1787

The cession of Virginia's Northwest Territory to the United States Government in 1781 and the conditions imposed by Virginia were incorporated in the ordinance of 1787.

The Ordinance of 1787 was adopted July 13, 1787, nearly a year and eight months before the United States Constitution was adopted.

Article IV of the ordinance provides in part:

...The navigable waters leading into the Mississippi and St. Lawrence, and the carrying places between the same, shall be common highways and forever free, as well to the inhabitants of the said territory, as to the citizens of the United States, and those of any other states that may be admitted into the confederacy, without any tax, impost, or duty therefor...

Article V of the Ordinance provides that a state formed in said territory

...shall be admitted by its delegates, into the Congress of the United States, on an equal footing with the original states in all respects whatever, and shall be at liberty to form a permanent constitution and state government...

2. Wisconsin Constitution

Wisconsin was admitted as a territory on April 20, 1836. The first paragraph of the Wisconsin Enabling Act provides as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in
Congress assembled, that the people of the Territory of Wisconsin be, and they are hereby, authorized to form a constitution and state government, for the purpose of being admitted into the Union on an equal footing with the original States in all respects whatsoever, by the name of the State of Wisconsin.

Section 3 of the Enabling Act provides:

And be it further enacted, That the said State of Wisconsin shall have concurrent jurisdiction on the Mississippi and all other rivers and waters bordering on the said State of Wisconsin, so far as the same shall form a common boundary to said State and any other State or States now or hereafter to be formed or bounded by the same; (and said river and waters, and the navigable waters leading into the same, shall be common highways and forever free, as well to the inhabitants of said State as to all other citizens of the United States without any tax, duty, impost or toll, therefor.) (Parenthesis added)

In the act admitting the State of Wisconsin into the Union, the provision that the navigable waters would be public highways was omitted. However, the Constitution of the State, adopted by the Territorial Convention on February 17, 1848 and approved by the act admitting Wisconsin into the Union, contains the following provisions:

…and the river Mississippi and the navigable waters leading into the Mississippi and St. Lawrence, and the carrying places between the same, shall be common highway and forever free, as well to the inhabitants of the State as to the citizens of the United States, without any tax, impost or duty therefor. (Article IX, Section 1.)

Such parts of the common law as are now in force in the territory of Wisconsin not inconsistent with this Constitution shall be and continue to be part of the law of this state until altered or suspended by the Legislature (Article XIV, Section 13).

3. Legislative Language

As Wisconsin grew, the need for legislative action to authorize development of the surface waters increased significantly. In 1853 the legislature adopted Chapter 72, Laws of 1853, approved April 5, 1853. This law declares that the common law of England, in so far as it may be applicable under Wisconsin conditions, shall be the law of Wisconsin in determining the boundaries of lands adjoining waters and the several respective rights of individuals, the state, and its citizens in respect to all lands or waters.

Territorial and early state legislative action generally authorized use or exploitation of the state's waters. Examples of that legislation include the Green Bay-Mississippi Canal Company and other canal companies which were chartered during territorial times and early statehood. The Mill Dam Act was an effort to support the farming and logging industry in the State by making use of the state's waters available to individuals or corporations involved in those industries. Log driving dam companies and boom companies were also authorized by legislative charter. All of this legislative action reflects the need for a positive action by the trustee to authorize individual or corporate use of the public trust compatible with protecting the public trust.

Inherent in all of these actions was the need to serve the public interest. For example, it was in the public interest to build mill dams for the grinding of grain and sawing of logs. Granting portions of the public lakebed is another interesting example of the need for an expression of the public interest. Early efforts by the legislature to grant portions of the lakebed were held unconstitutional because they served a narrow collection of private interests. By successive
rewording of attempted grants, the language of the grants eventually incorporated sufficient public interest to be judged constitutional.

4. Court Decisions

Supreme Court decisions have played a major role in the evolution of the water regulation program. They are of statewide impact and, therefore, must be incorporated into the administration of the program. There are several hundred decisions of significance to the water regulation program.

Circuit court decisions are generally of significance only to the particular case. A few are significant enough to be related in the training material.

Appeals court cases are generally of statewide significance.

A matrix (Appendix 1) relates each court case to appropriate subsections of Chapters 30 and 31. An annotated bibliography (Appendix 2) lists the significant points made in each court case.

5. Attorney General's Opinions

The Attorney General (AG) is the chief state legal officer. He is required to resolve legal disputes of an informal nature between agencies. He responds to requests for legal advice and assistance from county district attorneys. His decisions are binding on state agencies. Many Attorney General's opinions have helped shape the water regulation program. Pertinent AG opinions are discussed in separate sections.

6. Administrative Interpretations

Administrative interpretations include Bureau of Legal Services' opinions and agency administrative rules. The matrix of administrative rules was described earlier in this chapter.

Bureau of Legal Services opinions are only binding on this agency and not on other state agencies, persons, corporations or municipalities.

Rules and opinions that have shaped water regulation are discussed in the appropriate sections.

C. Fundamental Concepts in Water Regulation

1. Trust Doctrine

In Wisconsin the waters of the state are said to be held in trust by the state for the public. This principle, known as the "trust doctrine" has been followed from the beginning in the formation of water rights in Wisconsin. It is a reflection of the Northwest Ordinance and our constitution.

The origin of the trust is the common law of England, as understood and adopted by the Wisconsin Supreme Court. In its enabling legislation Wisconsin followed the main principles of the doctrine but modified it to the extent that while the state keeps custody of all waters for the public, it only has true ownership of the beds of natural navigable lakes. Beds of navigable stream are owned by the stream riparian. This ownership is qualified since the state retains custody of the water which flows over the bed.

This custodianship (trust) cannot be surrendered or alienated. It can be delegated for a public
purpose or use which is for the public benefit provided the state retains ultimate control. This custodianship also gives the state the authority to make rules and regulations governing these waters. The power of the state to govern and control public waters is perpetual. All privileges or uses granted in public waters are subject to this power of the state. The trust doctrine thus governs all the laws which regulate surface waters in Wisconsin subject to the overriding national interest.

2. Navigability

The definition of navigability used in the State of Wisconsin has been remarkably consistent over time. There has, however, been substantial variation in administrative practice. This variation has led to many situations where we have in effect changed our mind or have been forced to change our mind by court decisions. The most recent definition comes from the DeGaynor Supreme Court case. It represents the evolution of a definition process dating back to the adoption of the English riparian doctrine as Wisconsin's basic water law by the legislature in 1853. Navigability and the determination of navigability are discussed in detail in Chapter 155 of these materials.

Informal opinions such as a verbal opinion or letter or memo will usually be sufficient for most inquiries we receive as a prelude to an application or enforcement action. Declaratory rulings pursuant to Chapter 227, Stats., or court decisions formally determine navigability.

3. Ordinary High-Water Mark

The ordinary high-water mark (OHWM) of a waterway is of special significance because it is the boundary that separates private and public rights. In addition, the major permitting authority of the department begins at that boundary.

The presently accepted definition of the OHWM is found in the 1914 Supreme Court decision in the case Diana Shooting Club v. Husting (case 146 in Appendix 1).

"By ordinary high-water mark is meant the point on the bank or shore up to which the present and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation, or other easily recognized characteristic..."

The OHWM is discussed in detail in Chapter 40 of these materials.

D. Tools used in Water Regulation

1. Benchmarks

Benchmarks are points of known elevation and position. They are set for use in regulating water levels or in keeping a history of lake elevations and stream flow. Benchmarks are important aids in administering many sections of the water laws. They are used in the process of granting or denying permits for dam and bridge construction, for diverting water for irrigation and as a permanent reference for relating violation surveys. Ordinary high-water marks can be referenced to benchmarks. The procedure for setting and using benchmarks is given in appendix 3 of these materials.

2. Monitoring

Lake levels should be taken on approximately 30 percent of the lakes per year per district, both in
the spring and fall. Benchmarks should be checked and/or replaced or secondary marks set as necessary. Mean sea level elevation level lines should be run to our benchmarks that are close to USGS or USCGS benchmarks. It is important that a percentage of the lakes have levels taken every year so a good history can be kept for future permit or enforcement activities.

F. Filing Guidebook.
Directions for filing procedures in the water management program are found in Appendix I of Part VII of the DNR Filing System Guidebook.
Date: May 14, 1984

To: Water Regulation Section  
Water Management Coordinators  
Water Management Specialists

From: Scott Hausmann - WRZ/5

Subject: Water Regulation Topical References

Attached is a copy of a reference table that John Coke developed last fall as he attempted to learn the program. I am much impressed by his effort and have found the table to be extremely useful.

This is the first crack at a final (?) draft, so if you have any comments, corrections, additions, atta-persons, ah-sh ts, etc., please send them directly to John.

If you need additional copies, please contact Elly Lawry.

SH:el
Attach.

[Attachment not scanned]
The purpose of this guidance is ultimately to ensure that all files referred to the Bureau for a contested case hearing are complete and accurate. But most important is that everyone knows what is required in a referred file to expedite its scheduling and to aid the judge or hearing examiner in his/her decision.

Files referred to the Bureau should contain the following information:

1. A copy of a complete application and plans. (Originals are preferable. Remember the hearing examiner/judge will be reviewing this information.) Plans must include pertinent information identifying bench marks, elevations, dimensions, etc.

2. Photographs (3" x 5") are extremely helpful in understanding various issues that may lead to the approval/denial of a permit application. All photographs should be properly identified (who, what, where, when, etc.).

3. A completed 3500 - 23 inspection form should accurately and adequately describe the proposed project, anticipated impacts and evaluation of the project. Remember this form is the document which provides the foundation for the Department's position regarding approval/denial of an application.

4. Copy of an approved environmental assessment (if required or warranted) with all exhibits properly identified and attached to the document. Although some referred files are considered Type III actions under NR 150, that does not preclude us from preparing an assessment if one is warranted. EA's are not intended for use as a decision making document, but they are extremely helpful in providing an objective analysis of the impacts that may result from a given activity.

5. Clear copies (or signals preferred) of any additional information such as DNR/Applicant correspondence, scientific/engineering reports, objection/support letters and previous correspondence or actions (historical) that may have some bearing on the project. An outline describing what permits are required (local, state and federal) and what people in these regulatory processes (SEWRPC, FWS, Corps, Zoning Department, etc.) you have conferred with and if those people can provide information for the hearing and/or any other pertinent information.

6. An indication that the file has been reviewed to ensure completeness and compliance with all statutory and administrative code requirements (emphasis added).

7. Cover memo from the district office indicating district recommendations, preferred hearing dates, and witnesses that should testify.

A handy guide for reviewing a file before referring it is: does the file contain enough information in it that someone, who if familiar with the program (but not the specific case), can sit down and write a legally defensible approval/denial order based on the file. Remember, the examiner/judge is ultimately going to
have to do exactly that and we are obligated to present a good basis for that decision.

As you know, it takes a long time to get a file scheduled for hearing. Hopefully a little more effort on our part may help expedite the process.

Reviewed by:
Byron Dale Simon
John Coke
Richard Vogt
Robert Sonntag
Michael Cain

cc: Robert Roden - WRZ/5
James Kurtz - LEG/5
Art Doll - M&B/5

3330I
DATE: January 5, 1987

TO: District Directors

PMMS Response
Insertion: Chapter 10, Water Regulation Handbook,
Chapter 15, Floodplain-Shoreland Management Guidebook

FROM: Robert W. Roden - WZ/6

Distribution:
All Water Management and Floodplain Staff

SUBJECT: Notice of Appeal Rights

Here are revisions of the Notice of Appeal Rights for the Water Regulation and Zoning program decisions. These revisions are taken from the complete set of Notice of Appeal Rights recently issued (November 13, 1986) by the Bureau of Legal Services.

The appeal period begins on the date the decision was mailed or otherwise served (e.g., hand delivered). Therefore the appeal rights notification in the decision must inform the recipient of the date of mailing or service. The following are options you can choose from to do this. The language should be inserted at the end of the notification of appeal rights on the decision (do not put into a cover or transmittal letter).

1. Option 1: "This decision was (mailed)(served) on the day it was signed."
   Discussion: This can be preprinted and only requires indicating whether the decision was mailed or served by another means. If one technique (e.g., mailing) is always used for a type of decision, you don't need the "(served)" option. You can use this method if you know when mailing will occur and the signature on the decision is dated accordingly. This option must be used for all "Form 3" notifications.

2. Option 2: "This decision was (mailed)(served) on ___________________:
   (date)
   Discussion: This can be preprinted. The date can be handwritten, typed, or stamped into the blank. The signature date can be made the same or the two can be different.

3. Option 3: Use a stamp which says "MAILED" and has a variable setting for the date.

4. Option 4: "This decision was mailed within ________ days of the day it was signed and any appeal of it must be served on the Department within ________ days after the decision was signed."
   Discussion: This is an awkward approach but you may wish to use it if you don't know when mailing will occur but do know how long the delay could be. The number of days can be handwritten, typed or stamped into the blanks (obviously the second number is 30 more than the first).

Now for the revised notifications and the types of decisions for which they should be used:
NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed.

For judicial review of a decision pursuant to sections 227.52 and 227.53, Stats., as renumbered by 1985 Wisconsin Act 182, you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to section 227.42, Stats., as renumbered by 1985 Wisconsin Act 182, you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30-day period for filing a petition for judicial review.

This notice is provided pursuant to section 227.48(2), Stats., as renumbered by 1985 Wisconsin Act 182.

Use Form 1 for:

- s. 30.10(2) approval of private bridges over streams under 35 feet in width
- s. 30.11 bulkhead line approval or denial order
- s. 30.12(2) structure permit
- s. 30.12(3) riprap, sand blanket, fish crib, or ford permit or denial
- s. 30.121 certification of repair cost for boathouses
- s. 30.126(8)(c) order to remove noncomplying Wolf River fishing raft
- s. 30.13 pierhead line approval or denial order
- s. 30.15(2) consent to placement of temporary booms
- s. 30.18(2)(a) or (b) diversion permit
- s. 30.19 enlargement of waterway permit
- s. 30.195 channel change permit or denial
- s. 30.196 enclosure of waterways
- s. 30.20 dredging permit
- s. 31.02(l) levels and flow order
- s. 31.02(2) and (4) order regarding construction, operation, maintenance, or equipment for a dam
- s. 31.05/31.06 permit to construct, operate, and maintain a dam
- s. 31.07/31.08 permit to operate and maintain an existing dam
- s. 31.12(l) and (2) approval of plans for dams
- s. 31.13 permit to raise, enlarge, or rebuild a dam
- s. 31.18(l) approval to remove or destroy certain equipment
- s. 31.18(3) order approving or denying "substantial alteration or addition" to adam
- s. 31.185 permit to abandon or transfer ownership of a dam
- s. 31.21 approval to transfer a permit for a dam
- s. 31.23 permit to construct a private bridge
- s. NR 115.05(2)(a)7 and NR 117.05(1)(a)7 decision adopting final wetland inventory maps for regulatory purposes and published notices of such adoption
- s. NR 115.06(2) issuance or denial of approval for a shoreland zoning ordinance
- s. NR 116.07(1) approval of a hydrologic or hydraulic study
- s. NR 116.21(6)(c) issuance or denial of approval for floodplain zoning ordinance amendments
- s. NR 116.22(2) issuance or denial of approval for a floodplain zoning ordinance
s. NR 117.06(2)(a) issuance or denial of approval for a shoreland wetland zoning ordinance
s. NR 118.07(1)(b) issuance or denial of approval for a Lower St. Croix Scenic Riverway ordinance
s. NR 118.07(2) objection by DNR to a "conditionally permitted" activity
s. NR 299 water quality certification waiver, grant or denial

Form 2 Notice of Appeal Rights

**NOTICE OF APPEAL RIGHTS**

If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed.

For judicial review of a decision pursuant to sections 227.52 and 227.53, Stats., as renumbered by 1985 Wisconsin Act 182, you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

This notice is provided pursuant to section 227.48(2), Stats., as renumbered by 1985 Wisconsin Act 182.

Use Form 2 for:

s. 30.20 dredging contract or denial of contract

Form 3 Notice of Appeal Rights

**NOTICE OF APPEAL RIGHTS**

Any person whose legal rights and privileges are interfered with or impaired, or are threatened with interference or impairment, by the ordinance which is adopted herein may seek judicial review of the validity of the ordinance in an action for declaratory judgment, in accordance with the provisions in section 227.40, Stats., as renumbered by 1985 Wisconsin Act 182. The Department of Natural Resources must be named as the party defendant in such an action. This notice is provided pursuant to section 227.48(2), Stats., as renumbered by 1985 Wisconsin Act 182.

Use Form 3 for:

s. 30.126(7)(b) order adopting uniform Wolf River fishing raft registration system for a noncomplying municipality
s. 30.27(3) order adopting a Lower St. Croix Scenic Riverway ordinance for a noncomplying municipality
s. 59.971(6) order adopting shoreland zoning ordinance for noncomplying county
s. 59.971(7) order declaring city or village ordinance invalid
s. 61.351 and 62.231 order adopting shoreland-wetland zoning ordinance for noncomplying village or city
s. 87.30(l)(b) order fixing floodplain limits or adopting floodplain zoning ordinance for noncomplying municipality

Reviewed by:
Scott Hausmann
Mike Cain
Larry Larson
Several statutes require riparian status for a person to apply for and receive permits under Ch. 30 (e.g., ss. 30.12, 30.18 and 30-195). Questions have arisen over what should be done if the riparian property is owned by more than one person (this would also include marital property).

Where the property is owned by more than one individual, all of the individuals who own that property must be co-applicants for the permit or approval. If these owners are represented by an agent, board of directors, or officers of an organization or corporation, the duly authorized individuals must sign the application. In these situations, we need a valid statement from all of the owners such by-laws of the organization, shareholder resolution, power of attorney, etc., allowing the authorized representatives to act on behalf of all of the owners. If an applicant does not meet these requirements, we do not have jurisdiction to proceed and the application must be dismissed.

In the case of an applicant who is married, there is a presumption under the new Wisconsin Marital Property Act that all property of spouses is marital property subject to joint control. Although there are provisions in the Marital Property Act which allow an individual spouse to manage and control property under certain circumstances, such management actions are subject to review by the other spouse to assure that the action was taken in "good faith." Therefore, we should request the signature of the spouse of any applicant who is married.

An information sheet that you can attach to the general application form, or to a specific application form, is attached. This form recognizes the existing law on riparian ownership (after Cassidy, et al v. Department of Natural Resources).

Reviewed by:
Scott Hausmann
Michael Cain

RWR:sm/5868I
cc: Jim Kurtz   LC/5
Mike Cain   LC/5

NOTE: If this application is for a permit under ss. 30.12, 30.18, or 30.195, Wis. Stats., the owner of the riparian (shoreline) property involved must sign this application. If the property is owned by more than one person, all owners must sign. If the property is marital property, the spouse(s) of the owner(s) must sign. If there is a duly authorized agent or representative with specific authority from the owner(s) to apply for this permit, the agent or representative may sign this application on behalf of the owner(s). The agent or representative may be asked to provide written documentation of his or her authority to act on behalf of the owner(s).9262H
CORRESPONDENCE/ MEMORANDUM

STATE OF WISCONSIN

DATE: May 4, 1987   FILE CODE: 3500

TO:    District Directors

PMMS Response
Insertion: Ch.10, Water Regulation Handbook

Distribution: All program staff

FROM:             George Meyer

SUBJECT: Department objections to proposals under Chs. 30 and 31 which require public notice and Department appeals of Hearing Examiner decisions

Objections

As you know, various provisions of Chs. 30 and 31, Statutes, require a Class I legal notice before the Department can grant a permit. The Department also has the authority in a number of other situations to issue a Class I legal notice on its own initiative.

When a Class I notice is issued, any objection received from the public is not valid unless it was made within 30 days of the date the notice was published in the appropriate newspaper. That same time limit should apply to objections raised by the Department, even though this is not legally required. I believe this is the proper approach because we should know our position before a notice is sent (see discussion below) and because we should be able to make these judgments within the same time constraints imposed on the public. The only exception to this that I consider justified is if we base our objection on significant new information, received from the public or otherwise discovered by the Department during the 30-day notice period, that we were not previously aware of. This exception should only be used in very limited circumstances where the information could not have been previously discovered by due diligence on our part.

The preferred procedure is not to issue public notices until we have determined whether or not we have objections to the project. Obviously, if we object, we can advise the applicant that he or she has the option of withdrawing the application or proceeding directly to a public hearing. That way the applicant only pays for the publication of one legal notice. I understand that there will be times when you will deem it necessary to issue the public notice anyway to speed up processing time or to determine whether or not a project is highly controversial. However, you should be prepared to object within the 30-day period or to grant the permit if no timely objections are made by others, unless the exception noted above applies.

Appeals

There are several procedures that can be used to reopen or appeal Chapter 30 or 31 decisions by Hearing Examiners following contested case hearings. For a Department-initiated appeal or similar action, the request must be made by the Administrator, Division of Enforcement.

1. Reopening hearing: The Department (Secretary) or the Hearing Examiner can issue an order reopening a hearing which was closed if there is substantial new evidence which is important to the case. Procedures are in NR 2.16, Wis. Adm. Code.

2. Rehearing: A petition for rehearing may be filed by any "party of record" within 20 days after a final decision is issued. Criteria and procedures for granting a rehearing are contained in s. 227.49, Stats. The Department
(Secretary) is empowered to grant or deny the petition.

3. Review by the Secretary's office: A request can be made that the Secretary or his designee review the record and be the final agency decision-maker in lieu of the Examiner. The procedure is spelled out in NR 2.20, Wis. Adm. Code.

4. Judicial review: If the Examiner's decision is treated as a final agency decision and the decision is subject to judicial review (true for any ch. 30 or 31 proceeding), the Department (Secretary) may petition for judicial review. This procedure is specified in s. 227.46(8), Stats.

The criteria for reopening hearings are fairly clear. Requests will be sent to the Administrator, Division of Enforcement. The times when we will pursue any of the other remedies will be limited to situations where we believe the Examiner's decision not to be well-reasoned or where we feel there are major errors based on the law or on the facts of the case. In either situation, there should also be a significant concern about a critical natural resource or major adverse policy implications before an appeal is made. If we choose to appeal, the NR 2.20 procedure will normally be used instead of s. 227.46(8).

Questions regarding these procedures can be addressed to Bob Roden or Jim Kurtz.

RWR: dlm
cc: Bob Roden - WZ/6
Jim Kurtz - LC/5
Area Directors
Mike Cain - LC/5
Scott Hausmann - LC/5
5868I
TO: District Directors

PUT IN: Chapter 10, Water Regulation Handbook

FROM: Scott Hausmann - WZ/6

DISTRIBUTION: All Program Staff

SUBJECT: Entering Excavations or Trenches

Last Spring the Department contracted with an industrial hygienist to perform a comprehensive job hazard identification. Safety plans are to be prepared for each of the job activities identified in that report. One activity identified for water regulation staff, and the subject of this guidance, is the entering of excavations or trenches. Entering excavations or trenches could be encountered by program staff at various construction sites as a result of the need to determine or verify compliance with Chapter 30 and 31 permit conditions for various types of construction projects.

In all cases program staff should not enter an excavation or trench unless the walls or sides are properly shored, or the sides are sloped gradually to the base of the excavation. Even where the excavations are shored ladders should be available for rapid exit, should it become necessary. All ladders should be inspected for defects such as loose rungs, adequate attachment and properly pitched. Only one person should be on the ladder at a time.

In addition to the above general safety precautions, under certain circumstances a trench or excavation could be considered a confined space. Entry of confined spaces by public employees is covered by Chapter ILHR 31 Wis. Adm. Code. As defined by ILHR 31.01(2) a confined space is an environment which by design or construction has all four of the following characteristics:

1. Limited openings for entry and egress.
2. Unfavorable natural ventilation.
3. Could reasonably be believed to have dangerous air contaminants or contain material which may produce dangerous air contaminants.

Prior to entering a confined space the inspecting staff must be trained in confined space entry procedures. This training should provide staff with the knowledge to recognize, understand and control air quality hazards that may be encountered in confined spaces. Staff must also receive training in multi-media first aid and cardio pulmonary resuscitation before entering a confined space. Each district has a designated confined space coordinator that can be contacted to assist you in determining if a particular trench or excavation should be considered a confined space. He should also be contacted to obtain any necessary air testing or safety equipment.

Extreme caution and common sense should be utilized prior to entering any trench or excavation and the first rule-of-thumb should always be "If in Doubt, Stay Out."

Reviewed By:
TO: District Directors

Insertion: Chapter 10 Water Regulation Handbook

Distribution: Program Staff

FROM: Scott Hausmann - WZ/6

SUBJECT: Preparation of Files for Hearings

Recently, the scheduling of files referred to the bureau for hearing has been delayed because of either missing or incomplete information. Also, in the past, we have allowed statutory or administrative standards to be addressed concurrently with scheduling and noticing of a hearing. This policy has not worked well and has occasionally forced staff to scramble to provide the information or rush to the site for a last minute inspection. This guidance in the form of activity specific checklists should serve to provide a list of information which should always be addressed completely prior to forwarding a file to the bureau. Hopefully, the use of these checklists will prevent scheduling delays and other problems.

In a July 18, 1984 program guidance, Paul Scott Hausmann listed a number of items which should be included in all hearing files. These items are repeated below:

1. A copy of a complete application and plans. (Originals are required to allow for adequate review. Remember the hearing examiner/judge will be reviewing this information.) Plans must include pertinent information identifying bench marks, elevations, dimensions, etc.

2. Photographs (3" x 5") are extremely helpful in understanding various issues that may lead to the approval/denial of a permit application. All photographs should be properly identified (who, what, where, when, etc.).

3. A completed 3500 - 23 inspection form should accurately and adequately describe the proposed project, anticipated impacts and evaluation of the project. Remember this form is the document which provides the foundation for the Department's position regarding approval/denial of an application. If an explanation is required for a specific item, please address the item completely.

4. Copy of an approved environmental assessment (if required or warranted) with all exhibits properly identified and attached to the document. EA's are not intended for use as a decision making document, but they are extremely helpful in providing an objective analysis of the impacts that may result from a given activity.

5. Clear copies (originals preferred) of any additional information such as DNR/Applicant correspondence, scientific/engineering reports, objection/support letters and previous correspondence or actions (historical) that may have some bearing on the project. An outline describing what permits are required (local, state and federal) and what people in these regulatory processes (SEWRPC, FWS, Corps, Zoning Department, etc.) you have conferred with and if those people can provide information for the hearing and/or any other pertinent information.

6. An indication that the file has been reviewed to ensure completeness and compliance with all statutory and administrative code requirements (emphasis added).
7. Cover memo from the district office indicating district recommendations, referred hearing dates, estimated length of hearing, and witnesses that should testify.

RWR:KGJ:jd/6400I
Check List for 30-10 Applications/Hearings (Approvals)

<table>
<thead>
<tr>
<th></th>
<th>Included or Addressed</th>
<th>Witness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Signed application</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Navigability</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Conforms to NR 320</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) Clearance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) Flood flow capacity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NR 116, Less than 0.01' BW</td>
<td></td>
</tr>
<tr>
<td></td>
<td>or amendments/easements or contained</td>
<td></td>
</tr>
<tr>
<td></td>
<td>on property or meets NR 320.06(2)(3) thru (d)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Scaled Plans</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Copy of 3500-23</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>NR 15U type and compliance</td>
<td></td>
</tr>
</tbody>
</table>
# Check List for 30.11 Bulkhead Line Approvals/Hearings

<table>
<thead>
<tr>
<th>Included or</th>
<th>Addressed</th>
<th>Witness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Approved Ordinance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Technically adequate BHL and Map (6 copies)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Closes within accepted tolerances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Adequately documented with benchmarks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Adequately mapped</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) Scale at least 1&quot; =100'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) OHWM shown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) BHL shown (Begins and ends at OHWM)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) BM shown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) Stamped by a registered surveyor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) Referenced to section quarter corner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7) Existing shoreline shown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Conforms as nearly as practicable to the shoreline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. In the public interest</td>
<td></td>
<td></td>
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<tr>
<td>5. Regularizes the shoreline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Existence of submerged leases (verified)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Conforms to NR 1.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Conforms to NR 115</td>
<td></td>
<td></td>
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<tr>
<td>9. Conforms to NR 116</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Conforms to NR 117</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. NR 150 type and compliance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Check List for 30-12 Applications/Hearings

<table>
<thead>
<tr>
<th></th>
<th>Included or Addressed</th>
<th>Witness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Riparian owner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Application signed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Deed or property tax statement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Within riparian zone of interest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Navigability (if stream)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Standards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) &quot;Structure does not materially obstruct navigation&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) &quot;Does not ... reduce effective flood flow...&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) &quot;Not detrimental to the public interest.&quot; (Scenic beauty, game habitat, adequacy, alternatives)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. No BHLs in the project area</td>
<td></td>
<td></td>
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<tr>
<td>5. Conforms to NR 1.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Conforms to NR 115</td>
<td></td>
<td></td>
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<tr>
<td>7. Conforms to NR 116</td>
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<td></td>
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<tr>
<td>8. Conforms to NR 117</td>
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<td></td>
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<tr>
<td>9. Conforms to NR 325</td>
<td></td>
<td></td>
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<tr>
<td>10. Conforms to NR 326</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) If marina, open to public</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Reasonable fee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Allows for passage of littoral drift (combination structures may be exempt)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Copy of public notice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Copy of 3500-23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. NR 150 type and compliance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Conforms to NR 320</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Clearance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) NR 116, less than .01' BW Amendments/Easements/Contained on Property</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Letter of objection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Conforms to NR 327</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Check List for 30.121 Boathouses Certifications

<table>
<thead>
<tr>
<th>Included or Addressed</th>
<th>Witness</th>
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</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

1. Conforms to NR 325

   a) Maintenance records
   b) Assessed value
   c) Repair estimates

   _______    _______  
   _______    _______  
   _______    _______  

Check List for 30.13, 30.14 Hearings

<table>
<thead>
<tr>
<th></th>
<th>Included or Addressed</th>
<th>Witness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Riparian Owner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Deed or property tax statement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Navigability (if stream)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Aid of navigation or incidence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Does not interfere with public rights</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Does not interfere with rights of other riparians</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Riparian rights line</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Existence of pierhead lines (verified)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Free movement of water and will not cause formation of land</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Compliance with municipal ordinances</td>
<td></td>
<td></td>
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<tr>
<td>9. No permit exists (verified)</td>
<td></td>
<td></td>
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<tr>
<td>10. Initial installation date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Plans (x-section and plan view)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Letter of objection</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Included or Addressed</td>
<td>Witness</td>
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<tr>
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<td>---------</td>
</tr>
<tr>
<td>1. Riparian</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Deed or property tax statement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Signed application</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Attorney's opinion on chain of title test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Public rights are not injured</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Surplus water determination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If diversion is more than surplus, consent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Plans (in duplicate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Copy of the public notice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Trout stream determination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Publication 213-57)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Total diversion and times</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. NR 150 type and compliance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. 3500-23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Conforms with NR 1.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Conforms with NR 102</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Conforms with NR 200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Letter of objection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Identification of downstream users and amounts</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Check List for 30.19 Applications/Hearings

<table>
<thead>
<tr>
<th></th>
<th>Included or Addressed</th>
<th>Witness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Signed application</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Project will not injure public rights</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Project will not cause environmental pollution</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Conforms to platting and sanitation laws</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>No &quot;material&quot; injury to riparians</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Conforms with NR 340</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Conforms with NR 180</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Conforms with NR 116</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Conforms with NR 115</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Conforms with NR 117</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Conforms with NR 1.95</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>3500-23</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>NR 150 type and compliance</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Copy of public notice</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Letter of objection</td>
<td></td>
</tr>
<tr>
<td>Included or Addressed</td>
<td>Witness</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>1. Signed application</td>
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Check List for 30.20 Applications/Hearings

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TO: District Directors

Insert: Chapter 10, Water Reg Handbook

FROM: Scott Hausmann - WZ/6

Distribution: WRZ Program Staff Bureau of Legal Services

SUBJECT: Determining Substantive Written Objections for Hearing Requests

Chapter 30, as amended (1987 Act 374), requires that "substantive written objections" be provided in order for a hearing request to be granted.

The goal of requiring substantive objections is to give clear purpose to hearings - to ensure that a legitimate public interest exists to warrant the expenditure of public funds for conduct of a hearing and to ensure that the hearing contributes to the legal basis upon which the decision must be made. On one hand, hearings are a way of getting a sense of the risk that the public is willing to take with natural resources and to explore data and theories - both of which are necessary where our knowledge of a project or its impacts are imperfect. On the other hand, hearings should not be held strictly for personal reasons or to slow administrative proceedings.

Statutory Guidance [Sections 30.01 (6b) and 30.02 (3), Wis. Stats.] The new statute gives the following guidance on what constitutes substantive objections:

1. Requests must be written, not verbal.
2. Requests must be received within 30 (thirty) calendar days from the date of publication of the notice, not including the publication date.
3. Requests must include a statement that the person objecting or a representative will be present to testify at the public hearing.
4. Requests must describe specific reasons why the project or action would violate statutes.

Interpretation

Item 4 has two elements:
- a legal right or interest, public or riparian, referred to in statutes (legal terminology or statutory references are not required)
- a reason why the project or action may affect the right or interest described. Use professional judgement to answer the question of the relation between the action and effect. Generally, deny requests only where there is overwhelming evidence that the project or action could not have the alleged effect.

What is NOT a substantive objection

A request does not contain substantive objections if:

1. No reason is given
2. The right or interest cited cannot reasonably be construed as one that is protected by statute
3. There is overwhelming evidence that the project or action could not, directly or indirectly, have the impact cited.
When a hearing request is denied

Closely scrutinize all written objections to make sure that they meet the definition of "substantive written objections." Denial of a hearing request must be made in writing, explaining the reason(s) for denial and the procedure for appealing the denial to circuit court. During the next six months, while we are gaining experience with this provision, any denial of a hearing request should be discussed with the bureau to assure basic statewide uniformity in such denials.

Litigation concerning whether this provision meets due process requirements is a distinct possibility. In denying hearing requests, we must assure that our judgments are defensible under the statute.

Related Guidance:  7-18-84 Referred File Criteria
                      9-28-87 Preparation of Files for Hearings

Requested by:
Ken Johnson

Drafted by:
Mary Ellen Vollbrecht

Reviewed by:
Ken Johnson
Mike Cain
TO: District Directors

March 27, 1989

Insert: Ch. 10, Water Regulation Handbook

Distribution: All Program Staff

FROM: Robert Roden, WZ
James Kurtz, LC

SUBJECT: Requirements for DNR Permits in Department of Transportation Right of Ways

Recently, the Department of Transportation issued a legal opinion (attached) which concluded that it (DOT) was exempt from being a co-applicant for activities regulated under Chapters 30 & 31, Stats., conducted by other entities on DOT right of ways. Their opinion is based on the following:

1. The Department of Transportation is not required to apply for permits unless a statute specifically requires such.

2. Section 30.12(4), Stats., provides for activities under DOT's sponsorship to not require permits.

Although DOT is correct relative to activities "carried out under their direction and supervision in connection with highway and bridge design, location, construction, reconstruction, maintenance and repair" (emphasis added), we cannot arrive at the same conclusion for regulated activities conducted by DOT or other entities which are not specifically mentioned in, or which are not in compliance with, the provisions of s. 30.12(4).

There are three basic situations that will dictate whether or not DOT is subject to the permitting requirements of the Department.

1) Activities conducted or administered by DOT or conducted by a duly authorized agent of DOT (contractor) within a DOT right of way, specifically mentioned in and complying with all of the provisions of s. 30.12(4), Stats., including DOT administered projects for local units of government, are exempt from the permit or approval requirements of sections 29.29, 30.11, 30.12, 30.123, 30.195, 30.20, 59.971, 61.351, 62.231, 87.30 or ch. 144 or 147 only. DOT and its duly authorized agents must still comply with all other permitting and/or approval requirements of law and administrative codes, not exempted under s. 30.12(4), regardless if within a right of way or not. It should be noted that the DOT/DNR cooperative agreement includes other activities such as railroad and airport projects that do not fall under s. 30.12(4), and are therefore subject to all provisions of law administered by the Department of Natural Resources.

2) Activities conducted by an entity other than DOT or its duly authorized agent within a DOT right of way, not held in fee title by DOT and not authorized by or under compliance with s. 30.12(4), Stats., must comply with all permit or approval requirements of law and administrative codes enforced by the Department of Natural Resources. If the regulated activity requires riparian status, the entity must either be the riparian, or a co-applicant with the riparian proprietor.

3) Activities conducted by an entity other than DOT or its duly authorized agent and within a DOT owned right of way and not authorized by or under compliance with s. 30.12(4), Stats., must comply with all regulatory
requirements of law and administrative codes enforced by the Department of Natural Resources. If the proposed activity requires riparian status, the entity must submit a copy of a DOT permit issued under s. 86.07(2), Stats., as well as a DNR permit application.

Drafted by: Dale Simon - WZ

Reviewed by: Ken Johnson - WZ
John Coke - WZ
Michael Cain - LC

cc: George Meyer - AD
Kathryn Curtner - EA
District Environmental Impact Coordinators
John Roslak - DOT/Madison
CORRESPONDENCE/ MEMORANDUM

STATE OF WISCONSIN

September 15, 1988 FILE REF: OGC 88-236

To: Marvin Schaeffer, Administrator
Division of Highways & Transportation Services

From: Philip Peterson, Deputy General Counsel
Office of General Counsel

Subject: DNR Navigable Water Permit
DOT Highway Right-of-Way Permit

The Town of Mercer proposes a dry hydrant on STH 51 right-of-way in Iron County. The Mercer hydrant will draw water by suction through a pipe from the Manitowish River 320 feet away. The Mercer dry hydrant is required for rural fire protection.

Mercer has already applied for and received a WisDOT permit authorizing the hydrant on STH 51 right-of-way. Section 86.07, Wis. Stats. Mercer has also applied for a DNR permit authorizing a dry hydrant suction pipe to draw water from the navigable waters of the Manitowish River. Section 30.12, Wis. Stats.

In an August 3, 1988, letter to Transportation District #7, Duane J. Lahti, a DNR Brule Area Water Management Specialist, states that as the riparian owner, WisDOT must be a co-applicant with Mercer for the requisite DNR permit. You ask, by September 7, 1988, request for legal service, whether DNR is legally correct when it concludes that DOT must be a co-applicant for the DNR permit. Under the applicable law, DOT should not need a DNR permit.

Beyond that stated conclusion, however, this matter is best considered by your Division's Bureau of Environmental and Data Analysis (BETA). BETA Director John Roslak and his staff regularly consult with DNR about a range of DNR water permit questions affecting DOT. BETA regularly consults with DNR under a Cooperative Agreement between DOT and DNR and in accordance with statutorily established "interdepartmental liaison procedures." This memorandum, with copies of the materials you provided attached, is sent to John Poslak for his staff to review and to discuss with DNR as may be appropriate.

To support the conclusion that no DNR permit for DOT is required, some general observations are pertinent. First, a longstanding presumption of statutory interpretation is that a statute of general application is inapplicable to the state unless it is expressly or by necessary implication made applicable to the state. State ex rel. Dept. of Pub. Instruction v. ILHR, 68 Wis.2d 677 (1975) State v. Milwaukee, 145 Wis. 131, 135 (1911) ("it is a general rule that such statutes in general terms do not bind the state"); 3 SANDS, SUTHERLAND STATUTORY CONSTRUCTION S 62.01 and (3), Wis. Stats, the statutory language under which DNR requires navigability water permits, does not expressly mention DOT or other state agencies, DOT is exempt from the DNR co-applicant requirement that is applicable to other riparian owners. Second, sec. 30.12(4) (a), Wis. Stats., itself reads in relevant part as follows:

Activities affecting waters of the state... carried out under the direction and supervision of (DOT) in connection with highway maintenance... are not subject to the prohibitions or permit or approval requirements specified under [sec. 32.12, Wis. Stats.]....

This quoted language is authority to conclude that because the Mercer dry hydrant will be installed on DOT highway right-of-way, under a DOT permit issued by the State Highway Engineer for Maintenance, with the
accompanying DOT direction and supervision given to Mercer as the permitted, no DNR permit for DOT is required so long as DOT follows the established DOT-DNR "interdepartmental liaison procedures" suggested for BETA in the preceding paragraph.

Finally, I believe this memorandum responds to your inquiry and will enable DOT to resolve this matter so that the Town of Mercer can proceed as appropriate. If, however, you or others would like to discuss this matter or would like additional assistance, please let me know.

PP:ck

cc: Michael Jaskaniec
    Ted Stephenson
    Robert Hardie
    John Roslak
Date: July 14, 1989

To: Water Regulation & Zoning Program Staff

Insert: Put in Chapter 10, Water Regulation Handbook

From: Scott Hausmann - WZ

Subject: Al Johnson vs. DNR Decision

The attached memorandum and circuit court decision is important in that it can and should be used to avoid processing applications which have previously been reviewed and rejected after hearing.

PSH:el

Attach.
DATE:       June 16, 1989
FILE REF:  3500

TO:        James Kurtz - LC/5
           George Meyer - AD/5
           Bob Roden - WZ/6
           Dave Jacobson - NWD
           Bureau of Legal Services Attorneys

FROM:      Michael Cain - LC/5

SUBJECT: Decision in Dane County Circuit Court in Alf Johnson vs. DNR

Attached please find a copy of the decision of Judge Mark Frankel in Dane County Circuit Court in the matter of Alf Johnson vs. DNR. This case involves a petition by a number of property owners for the Department to grant them approval to connect an enlargement to Spooner Lake. The Department of Natural Resources had previously reviewed this matter in a contested case hearing in 1978 and had denied a permit for essentially the same project. The Department received a petition for reconsideration in 1979 and denied the petition. The Department of Natural Resources moved to dismiss the current petition on the basis that the Department had previously made a decision on this matter.

Judge Frankel in his decision ruled that the Department of Natural Resources had shown that it had previously reviewed essentially the same application with the same parties and thus ruled in our favor based on "estoppel on the record." See page 7 of the attached decision.

The doctrine was novel to me (and apparently to the counsel involved in the case). While we do not have a great number of cases where this doctrine will be useful, there are occasionally cases where it can and should be used to avoid processing applications which have previously been reviewed and rejected after hearing.

You should note that the petitioner in this case has submitted another petition in this matter in an attempt to show that the situation has changed since 1979. We are not persuaded by their petition, and are again seeking dismissal.

MC:rh
v:\8907\lc9kurtz.mjc

Attachment

(AD-75)
CORRESPONDENCE/ MEMORANDUM

Date: April 11, 1989

File Ref:

To: Michael Cain

From: Steven Wickland
Assistant Attorney General

Subject: Decision in Alf R. Johnson, et al. v. DNR
Case No. 88-CV-4217

Mike, the trial court has ruled on our motion to dismiss the petition for review. Judge Mark Frankel's April 6, 1989, memorandum decision and order has a dual effect: 1) it grants the motion to dismiss, and 2) gives leave to petitioners to submit another petition, should they be able to show clearly any specific environmental or citizen attitude changes since 1979 (the time of their request for DNR reconsideration of the first agency decision), and how their amended plans will adequately address those concerns. The court applied the principles of administrative res judicata, which we briefed extensively, but centered its ruling on the similar, but much lesser known doctrine of estoppel on the record. A copy of the decision and order is attached for your file.

SBW:sld

Enclosure
ALF R. JOHNSON,
KEITH JOHNSON AND
THE NEST OF EAGLES FLIGHT
PILOTS ASSOCIATION

Petitioners,

v.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES,

Respondent.

MEMORANDUM DECISION AND ORDER

Petitioners Alf R. Johnson, Keith Johnson, and The Nest of Eagles Flight & Pilots Association (Petitioners) have brought this action for administrative review against the State of Wisconsin Department of Natural Resources (DNR) under Wis. Stats. Chapter 227. Petitioners challenge DNR's denial of their application to undertake a project to reopen a waterway located on Spooner Lake in Wisconsin. Specifically, petitioners allege DNR's denial of the application was arbitrary and in violation of their right of due process under sec. 227.57, Wis. Stats.; and that the findings by DNR at paragraphs 13 and 14 of the denial order are unsupported by substantial evidence. Petitioners request a judgment declaring the denial arbitrary and a remand to DNR for an administrative hearing upon the application.

DNR has filed a motion to dismiss the present action on three grounds. First, DNR alleges the action is in substance a request for a judicial review under sec. 227.52, Wis. Stats. and therefore untimely under sec. 227.53, Wis. Stats. Second, DNR alleges the application in question is essentially identical to one previously filed by the petitioners and reviewed and denied by DNR in 1978 and 1979, and is thus barred either as untimely or under the doctrine of res judicata. Third, DNR alleges the petitioners lack standing to bring this action because their complaint fails to set forth specifically what injuries the denial may have caused them.

In subsequent briefs the parties have agreed this is an action for judicial review and is timely in that respect. The remaining issues to be decided under this motion to dismiss are whether the petitioners have standing to bring this action, and if so, whether this petition should be dismissed as a result of res judicata.

For the reasons stated below, the petitioners have established standing as required under Wisconsin law. The petition as presented is, however, barred by the doctrine of estoppel by record. The motion by DNR to dismiss the petition will be granted, with leave to the petitioners to submit another action that addresses the concerns of DNR expressed in those petitions previously denied, and that qualifies as a new petition deserving of a hearing on the merits.

FACTS

Petitioners are riparian owners of real estate off a small harbor adjoining Spooner Lake in Washburn
In 1977, John Johnson made another application to DNR to connect the artificial pond to Spooner Lake and allow navigation into the lake. His stated intent was to develop single family homes, The Nest of Eagles Lodge, and a marina facility around the pond.

A public hearing was held on this petition August 9, 1978. DNR and 38 local citizens appeared with objections to the proposal. The petition was denied September 8, 1978. DNR expressed as a primary basis for denial its concern that the connection would cause increased nutrient loading to Spooner Lake, causing environmental pollution and negative impacts on water quality in the lake.

John Johnson did not seek administrative or judicial review of this denial within statutory time limits. On September 25, 1979, petitioners Alf R. Johnson and Keith Johnson, with Ruth Johnson, another riparian owner, petitioned DNR for reconsideration of the application denied in 1978. According to DNR, the petitioners suggested minor modifications in the dimensions of the proposed channel. DNR denied the petition for a rehearing by letter on November 12, 1979, and petitioners did not seek administrative or judicial review under the time limit set forth in sec. 227.53, Wis. Stats. Neither party has provided a copy for the record of either John Johnson's 1977 proposal, nor of the modifications proposed by petitioners in 1979.

Petitioners submitted the present application on November 20, 1987. DNR issued its denial June 27, 1988. Specifically, among its findings DNR stated, "The dimensions of the channel were somewhat smaller than the 1977 proposal, but it is essentially the same project which was reviewed and denied in 1978 and 1979." (Petition, Exhibit C, par. 12). DNR stated the water quality and environmental pollution concerns remain unchanged and that the project was still opposed by riparians on Spooner Lake, and for these reasons denied the petition. Id. par. 14, 16.

Petitioners allege this denial was arbitrary and in violation of due process; DNR argues petitioners lack standing and are also barred from bringing suit under the doctrine of res judicata.

STANDING

DNR bases its allegation that petitioners lack standing upon a failure to specify injury in the petition. DNR argues the petitioners have only identified themselves and the denial of their application, have merely made reference to alleged errors by DNR, and have not stated injury sufficient to confer standing under Wisconsin law. DNR takes the position this failure to clearly set forth a specific allegation of injury constitutes a basis for dismissal. Wisconsin case law is to the contrary.

The Wisconsin Supreme Court has established a two-part analysis to determine whether parties seeking to challenge an administrative rule have standing. Fox v. Wisconsin Department of Health and Social Services, 112 Wis. 2d 514, 524, 334 N.W. 2d 532 (1983). The first step is to determine whether the decision of the agency directly causes injury to the interests of the petitioner. Id. The second step is to determine whether the interest asserted is recognized by law. Id.

The law of standing in Wisconsin should not be construed narrowly or constricively. Fox, 112 Wis. 2d at 524. When an actual injury is demonstrated even a "trifling interest" may be sufficient to confer standing. Id.

The petitioners have demonstrated injury sufficiently to confer standing under Wisconsin law. They allege they are riparian owners on Spooner Lake; that they submitted an application to open the waterway and to
proceed with plans for building and improving the area; and that this application was denied. None of these facts are disputed. DNR appears to rest its argument on a technical omission by petitioners to state, "We have suffered injury." A reading of the complaint in its entirety demonstrates sufficiently that the petitioners feel this denial has caused them injury.

The petitioners have also alleged injury to a legally protected interest, thus satisfying the second part of the test. In DeNava v. DNR, 140 Wis. 2d 213, 221, 409 N.S. 2d 151 (Ct. App. 1987), the court stated:

"Sec. 30.12(2), Wis. Stats., simply reflects the rule that at common law riparian owners have certain rights incident to their ownership of land adjacent to water… A riparian owner has a right to build piers, wharf, booms, and similar structures in aid of navigation." Id.

While such rights are clearly subject to statutory requirements, they nonetheless must be accorded due process as required by statute.

ADMINISTRATIVE RES JUDICATA, OR ESTOPPEL BY RECORD

The final issue is whether petitioners' claim has previously been accorded due process protection and is thus barred by res judicata. It is DNR's position that this petition is essentially the same one submitted once by petitioner's father in 1978 and again by petitioners themselves in 1979. The 1978 petition was accorded a full public hearing; the 1979 petition was not. DNR alleges neither public nor environmental issues have changed, and since neither petition was appealed within the thirty-day time limit imposed by sec. 227.53(l)(a), Wis. Stats., the present petition is barred by virtue of res judicata.

Petitioners contend their plans have changed, and that this is their first petition. Alternatively, they argue there is no Wisconsin authority for DNR's position that res judicata may bar an application to an agency where the application is substantially identical to a previously denied application. This second assertion is incorrect. If two requirements are met, administrative res judicata will bar relitigation of the plaintiff's claim in federal court. Garner v. Unicare Health Facilities, Inc., 651 F. Supp. 422(423, (E. D. Wis. 1987). First, the administrative agency must have acted in a judicial capacity. Id. Secondly, the parties must have had a full and fair opportunity to litigate their case. Id.

A similar doctrine which neither party mentioned but which supports DNR's motion to dismiss is estoppel by records as set forth in Acharya v. AFSCME, Council 24, WSEU, 146 Wis. 2d 693, 432 N.W. 2d 140 (Ct. App. 1988). Estoppel by record is closely related to res judicata except that it is the former record, rather than the judgment which bars the second proceeding. Id at 696. Both rules require an identity of parties and an identity between the causes of action or the issues sued upon. Id. "When an administrative agency is acting in a judicial capacity and resolves disputed issues of fact before it which the parties have had an adequate opportunity to litigate, courts have not hesitated to apply res judicata or collateral estoppel." Id at 697.

This record establishes that DNR has met the requirements for estoppel by record, as set forth under the general principles of collateral estoppel.

A. Identity of Parties

Generally, collateral estoppel precludes relitigation of an issue of ultimate fact previously determined by a valid final judgment in an action between the same parties. Kichefski v. American Family, 132 Wis. 2d 74, 78, 390 N.W. 2d 76 (Ct. App. 1986). In place of requiring mutuality of parties, Wisconsin courts now require that the party against whom collateral estoppel is asserted had a full and fair opportunity to litigate the issue in question during the previous litigation. Id. The party must be given an opportunity to show that he or she did not have a fair chance procedurally, substantively or evidentially to pursue the claim. Id at 79-80.
Petitioners admit Alf Johnson's father made a similar petition to undertake a similar project in 1977. They do not dispute that a full public hearing was held in 1978 at which all parties appeared and presented evidence, and that it was upon the basis of this evidence the petition was denied. DNR also asserts that on September 5, 1979, the present petitioners requested reconsideration of what they described as suggesting minor modifications but was, "essentially the same petition." DNR states this petition for reconsideration was denied by letter on November 12, 1979, and petitioners did not seek review.

The only point at which petitioners imply disagreement with these facts is on the last page of their brief in which they state: "This application was these (petitioners') first." (sic). That assertion is belied by petitioners' own Exhibit A, a copy of the denial letter dated June 27, 1988. In that letter, addressed to Mr. Alf Johnson, it is stated: "In September, 1979, you made slight revisions to the proposal and requested that the Department reconsider the issue. The Department denied that request in November, 1979."

The petitioners do not attempt to deny the fact that they were the actual parties in a previous petition, nor that they failed to seek review of the 1979 denial. The identity of parties element is satisfied.

B. Identity of Issues

The doctrine of estoppel by record prevents a party from litigating again what was actually litigated or might have been litigated in a former action. Leimert v. McCann, 79 Wis. 2d 289, 293, 255 N.W. 2d 526 (1977). The second element of collateral estoppel requires the issue raised in the second suit be identical to that decided in the first proceeding, and that the controlling facts and applicable legal rules remain unchanged. Crowall v. Heritage Mutual Insurance Co., 118 Wis. 2d 120, 125, 346 N.W. 2d 327 (Ct. App. 1984).

In its Findings of Fact concerning the petition in question, DNR made the following specific findings:

13. The materials submitted by Alf Johnson and Keith Johnson do not constitute any significant change from the 1977 proposal and constitutes a request for rehearing in this matter.

14. The water quality concerns of the Department remain unchanged. The connection of the pond to Spooner Lake would cause increased nutrient loading to Spooner Lake, would cause environmental pollution and would have negative impacts on water quality in Spooner Lake.

15. The Department has reviewed and denied this application in 1978 and 1979.

16. The project is still opposed by riparians on Spooner Lake and by the Department.

Because the issue in question has already been determined by a final order in an action between the same parties, the burden is on the petitioners to demonstrate any legal or factual changes that have subsequently occurred regarding environmental concerns or citizen opposition and/or specific changes in their plans that would alleviate these concerns. Petitioners have failed to meet this burden. They admit in their brief that their predecessor in interest, "did file a petition in 1977 for similar administrative action" and, "That petition was denied." (Petitioners Brief, last page). However, they have not attempted to demonstrate how their plans have changed to make this a new issue for an independent administrative hearing. An observation that ten years have elapsed and a simple assertion that, "plans have changed" is not a sufficient basis to justify further consideration of the same question previously resolved on the merits.

ORDER

The facts on this record show that while petitioners have standing to request judicial review, the issue as represented has already been litigated and determined in a final action between the parties. In the interests of conservation of judicial and administrative resources and finality of administrative decisions, DNR's motion to dismiss this action is hereby GRANTED, with leave to the petitioners to submit another petition, should they be able to demonstrate with clarity any specific environmental or citizen attitude changes that have taken place since 1979, and how their amended plans will adequately address those concerns.
BY THE COURT

MARK A. FRANKEL
CIRCUIT JUDGE

DATED April 6, 1989
DATE: July 24, 1989

Insert: CH: 10 of The Water Regulation Handbook

TO: District Directors

FROM: Scott Hausmann

SUBJECT: Wood Preservatives in Water

Attached you will find several items which discuss the impact of wood preservatives in aquatic areas. The bottom line is that preservatives, creosote, pentachlorophenol and inorganic arsenicals, tend to leach into the water column but at a rate that is not considered harmful.

Requested By: Ed Bourget

Drafted By: Ken Johnson

Attachments

v:\8907\wz9presv.kgj
Date: January 15, 1985

To: Robert Roden/WRZ-5

From: Russ Dunst/TS-2

Subject: Used R&R Ties for Shore Protection

EPA recently re-evaluated its regulatory position RE: creosote, pentachlorophenol, and inorganic arsenicals. This involved review and assessment of available information/technical literature, with recommendations from a Scientific Advisory Panel. EPAs requirements for the future were contained in the Federal Register, Vol. 49, No. 136 (Friday, July 13, 1984). I have attached a copy of the section dealing with creosote-treated wood. Identical statements were made for the other wood preservatives.

The PD#4 document was obtained in order to examine the basis for their decisions (attached; microfiche). Pages 217-221 are most pertinent RE: usage for shore protection. Leaching does occur but would not be a significant concern. I'm not aware of any project that would be of sufficient magnitude to pose a potentially serious problem. The document should be retained by WRZ, or sent to the DNR Library.

RD/bjb
Attach.
cc: Dale Urso/NCD

APPROVED: Llyod Lueschow/TS-2 DATE: 1/15/85
THE BIOLOGIC AND ECONOMIC ASSESSMENT OF
PENTACHLOROPHENOL
INORGANIC ARSENICALS
CREOSOTE

VOLUME 1: WOOD PRESERVATIVES

A report of the Pentachlorophenol, Inorganic Arsenicals, Creosote assessment team to the rebuttable presumption against registration of Pentachlorophenol, Inorganic Arsenicals, Creosote

Submitted to the Environmental Protection Agency on
November 4, 1980

UNITED STATES  DEPARTMENT OF AGRICULTURE
IN COOPERATION WITH
STATE AGRICULTURAL EXPERIMENT STATIONS
COOPERATIVE EXTENSION SERVICE
OTHER STATE AGENCIES
U.S. ENVIRONMENTAL PROTECTION AGENCY
EXECUTIVE SUMMARY

The Environmental Protection Agency (EPA) issued notices of Rebuttable Presumptions Against Registration (RPAR) on creosote, inorganic arsenicals, and pentachlorophenol (penta) on October 18, 1978. The presumptions indicated that these products met or exceeded the risk criteria for various acute and chronic effects (40 CFR 162.11). Approximately 99% of these chemicals are used in protecting wood products against wood-destroying organisms. The balance is used on a wide variety of sites as fungicides, herbicides, insecticides, rodenticides, defoliants, desiccants, growth regulators, sterilants, repellents, and disinfectants. It is estimated that 44.5 million pounds of pentachlorophenol, 42 million pounds of inorganic arsenicals, and 124 million gallons of creosote and coal tar are used annually.

There are no practical chemical alternatives to these RPAR'd materials for structural wood protection where the risk of attack by wood-destroying organisms is high. However, the RPAR'd materials could, in most cases, be used as alternatives for each other. This fact makes the task of evaluating the economic impact of a cancellation difficult. There are no practical alternatives (chemical and non-chemical) to the organic arsenicals as a cotton desiccant, grapefruit growth regulator, or for grape disease control and ant bait uses.

Wood Preservative Uses

The cancellation of all three of the RPAR'd wood preservatives would result in higher costs of 4.5 to $6.3 billion annually depending on which combination of substitute materials is used. The total costs would be higher than this because the 4.5 to $6.3 billion accounts for only 86% of the pressure-treated wood products and does not include the 475 million cu. ft. of wood protected by non-pressure-processes.

Pressure Treatments

The loss of all preservatives on railroad ties would result in average annual cost increases of $2.1 billion as railroads shifted to concrete ties. Virtually all ties are currently treated with creosote. A cancellation of creosote alone would result in average annual cost increases of $36.8 million if railroads shifted to penta-treated ties.

The loss of all three preservatives for wood poles used by utilities would result in average annual cost increases of 1.9 to $2.8 billion depending on the combination of concrete and steel poles that would be substituted.

Because all three materials are used to treat utility poles, the cancellation of any one or two of them while retaining the others would result in different impacts. If only creosote were used, average annual costs would increase by $45.7 million; use of only inorganic arsenicals would result in cost decreases of $51.8 million; and use of only penta would result in cost increases of $27.1 million.

The substitution ratio between steel, concrete, and wood piling affects the economic impact. If use of all three preservatives were canceled and concrete piling were substituted for wood piling on a 1.0:1.5 basis, annual average cost would decrease by $21.5 million. However, if steel pilings were substituted on a 1.0:1.0 basis, costs would increase by $129.1 million. For technical reasons it is likely that substitution of concrete or steel for treated wood piling would fall somewhere between the ratios of 1.0:1.5 and 1.0:1.0. Therefore, the actual economic impact would lie between the figures presented.

The loss of all three preservatives on fence posts probably would not result in any significant cost changes if users shifted to steel posts. However, wood posts are often preferred to steel for aesthetic reasons.

The loss of all three wood preservatives for treating lumber, timbers, and plywood would cost from 485 million to $1,279 million depending on the combination of alternatives used. Alternatives include untreated cedar, redwood, or pine, concrete, steel, and chromated zinc chloride treatments. About 70% of all treated
lumber, timbers, and plywood is treated with inorganic arsenicals. Neither creosote nor penta is a satisfactory alternative for these uses.

Non-Pressure Treatment

The cancellation of both penta and creosote for groundline treatment of utility poles would result in increased costs of $35.3 million annually. Because penta and creosote are equally effective, with equal treatment costs, the loss of either one while retaining the other would not result in significant cost changes.

The loss of penta for sapstain control in lumber would result in a shift to Cu-8 with increased costs of $280,000 annually. The loss of penta for millwork and plywood would result in a shift to TBTO at an increased cost of $2.2 million or to Cu-8 at an increased cost of $4.8 million.

Non-Wood-Preservative Uses

Pentachlorophenol and Pentachlorophonates

The non-wood-preservative uses of penta are: Herbicide, defoliant, mossier, and biocide.

There are effective chemical alternatives for all of the non-wood-preservative uses of penta. The alternatives accomplish the desired results at equal or lower cost. The impact of canceling penta for these uses would, therefore, be negligible.

Inorganic Arsenicals

The non-wood-preservative uses of arsenicals are: Desiccant, growth regulator (grapefruit), fungicide, insecticide, rodenticide, herbicide, and soil sterilant.

Of the 12 non-wood-preservative uses of arsenicals addressed, there are effective chemical alternatives for some, most of which can be used at equal or slightly higher cost. The four uses for which suitable alternatives are not available are: arsenic acid (cotton desiccant), lead arsenate (growth regulator--grapefruit), sodium arsenate (ant bait), and sodium arsenite (Black Measles--grapes). In addition, alternatives are not as effective as calcium arsenate for Poa annua control in turf, or for slug and snail control in California citrus.

Cancellation of arsenic acid for desiccation of cotton would reduce annual revenues of cotton producers in Texas and Oklahoma by an estimated 20.3 to $49.9 million. Cancellation of lead arsenate for use on grapefruit as a growth regulator would reduce annual revenues of Florida producers by $5.8 million. If sodium arsenate were canceled for ant bait, householders could shift to other materials that would need to be applied more frequently, but total costs would be similar; however, if commercial extermination is selected as the control measure, the annual increased cost would be $42 million. Loss of sodium arsenite for control of Black Measles would result in increased vineyard establishment costs and losses from reduction in grape yields and quality totaling $13.3 million for producers of fresh market grapes and $11.0 million for producers of raisin-type grapes over a 6-year period following cancellation.

Creosote, Coal Tar, and Coal-Tar Neutral Oils

The non-preservative uses of creosote coal tar, and neutral oils are: Disinfectant, larvicide, insecticide, fungicide, herbicide, acaricide, arachnicide, and animal repellent.

Of the 15 non-wood-preservative uses of these chemicals addressed, only 5 are significant from the standpoint of frequency of use and volume of material applied. Drain fly and gypsy moth control (spraying undercarriage of vehicles) are two uses for which registered alternative chemicals are not available.
Fate in the Environment

Penta is ubiquitous in aquatic environments and its sources are unclear. It may result from direct contamination, from degradation of other organic compounds, or from chlorination of water. Penta may be removed from aquatic environments by volatilization, photodegradation, absorption, or biodegradation. Penta's moderate volatility suggests that volatilization may be a route to the atmosphere, but this is highly speculative. Persistence of penta in soil is extremely variable depending on pH, organic content, moisture content, clay mineral composition, free iron content, ion exchange capacity, and the microorganisms present.

Movement, persistence, and fate of arsenate in the environment are well known. Arsenate forms very insoluble compounds in soil and is generally moved only by erosion to aquatic environments where it may be adsorbed to sediment and removed from solution, adsorbed to plants, or ingested and metabolized by aquatic organisms. Under anaerobic conditions arsenate may be reduced to arsenite and metabolized to volatile alkylarsines. Volatilized arsenicals can be adsorbed on dust particles and oxidized to arsenate, methanearsonate, or cacodylate. Plants do not accumulate large quantities of arsenic if they grow well. Oceanic sediments are the ultimate sink for all arsenic.

Data on the environmental fate of the many chemical components of creosote and coal tar are limited. Naphthalene and its derivatives are rapidly biodegraded in both soil and water. The higher-boiling-point compounds such as fluorene, chrysene, anthracene, and pyrenes are much more slowly decomposed than naphthalenes. Available data are much too limited, however, to permit more than speculation on decomposition rates. Some studies have shown that reductions of these compounds in marine environments proceed exponentially with time and that residual amounts fall below the detection limit within 2 to 3 weeks.

Exposure

The no-observable-effect level for fetotoxicity of penta cited by EPA is 5.8 mg/kg/day. This value, divided by actual exposure, gives the safety factor. Varying exposures gave safety factors ranging from 20 to 580,000 for penta and 868 to 25 million for HxCDD. It is expected that the exposure in most work situations will result in safety factors above 100.
Date: November 6, 1989  
Insert: Chapter 10 Water Regulation Handbook  
To: District Directors  
Distribution: Program Staff  
From: Bob Roden- WZ/6  
Subject: Appeal Rights for Actions With No Notice

We have been advised by the Department of Justice that in view of the recent Court of Appeals decision, in R. W. Docks v. DNR, 145 Wis. 2d 854, (Ct. App. 1988), we need to revise our operating procedure in cases decided without notice or hearing. In R. W. Docks a decision to deny a dredging contract was appealed directly to the Circuit Court for review. The Court of Appeals eventually ruled that since no s. 227 Stats. hearing record existed there was "no record" to review and remanded the case back to us for a hearing.

In response to this decision it has been recommended that where we have neither issued a public notice nor held a hearing prior to making a decision, we should modify the Notice of Appeal Rights to direct the parties to request a contested case hearing in these cases rather than proceeding to judicial review.

The appeal rights option for decisions that do not require a public notice under 30.02 should be for the right to request a contested case hearing in accordance with section 227.42, Stats. Decisions made under the following shall include the notice of appeal rights language listed below:


3) Section 59.971(6)

4) Section 87.30(l)(a)

5) Sections 61.351(6) & 62.231(6)

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed.

To request a contested case hearing pursuant to section 227.42, Stats., you have 30 days after the decision is mailed or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources.

This notice is provided pursuant to section 227.48(2), Stats.
Decisions made under other sections requiring public notice are unaffected and should include appeal language allowing for a contested case hearing or judicial review.

Requested by: Bob Roden- WZ

Drafted by: John Coke- WZ

Reviewed by:  Ken Johnson- WZ
                Scott Hausmann- WZ
                Larry Larson- WZ
                Mike Cain- LC
Date: May 18, 1990

To: District Directors

From: Scott Hausmann- WZ/6

PMMS Response
Insertion: Chapter 10 Water Regulation Handbook

Distribution: WRZ Program Staff
Fish Managers

Subject: Section 30.19 Fish Farming Exemption

We have been asked if the recent A.G.’s opinion of 3-8-90 regarding the new definition of agriculture found in s. 30.40(l), Stats., relating to the loss of exemption from s. 30.19, Stats., requirements for fish farming activities is effected by the Romeo case and a previous program guidance dated April 2, 1987 which expanded on the Romeo case.

The hearing examiner's decision in the Romeo case concluded that fish farming is included in the s. 30.19, Stats., exemption for agriculture based on the definition for agriculture under s. 70.32(2)(c), Stats. Using the logic of the 3-8-90 A.G.'s opinion, it follows that since the Chapter 70, Stats., definition is for real estate assessments whereas the Chapter 30, Stats., definition is for resource protection purposes, the Chapter 30, Stats., definition is more appropriately applied to s. 30.19, Stats., projects.

It was also asked if projects exempted from s. 30.19, Stats., based on the Romeo decision can be considered legal now in light of this A.G.’s opinion. Projects exempted after the Romeo decision and prior to the 3-8-90 opinion are considered legal. Decisions on s. 30.19, Stats., agriculture exemptions made after 3-8-90 should be based on the s. 30.40(l), Stats., definition that does not include fish and fur farming or forest and game management.

Requested by: Dale Lang- NCD

Drafted by: John Coke-WZ

Reviewed by: Ken Johnson- WZ
Mike Cain- LC
Whoops, I goofed. We do not need to provide notice of judicial review for unnoticed decisions. Please discard the May 29, 1991, guidance and replace with this guidance.

Revisions to Chapter NR 299, Wis. Adm. Code, went into effect October 1990. Because of the revisions, new language is required for water quality decisions issued by the Department either individually or those included in Corps 404 public notices.

The following language and format should be used for Department issued water quality certification decisions.
WATER QUALITY CERTIFICATION LANGUAGE
FOR DEPARTMENT NOTICES

GRANTING CERTIFICATION

A public notice is required for the grant or conditional grant of certification (if there is no Chapter 30 or 31 action). If there is no Corps notice or if the "request for certification" was used in the Corps notice, the following format and cover letter should be used:

SUBJECT: Application for Water Quality Certification

Dear __________:

We are enclosing a Notice of Water Quality Certification, issued by the Department of Natural Resources. NR 299.05(4)(b), Wisconsin Administrative Code, requires publication of this notice.

The Notice must be turned over to the (Newspaper) for publication as a Class 1 Notice. The cost of publication is to be borne by you. Proof of publication must be made by affidavit of the publisher with copy of the printed notice attached. Such proof must be filed with the Department of Natural Resources ______(Address)______ after such notice has been published.

Your application cannot be processed further until completion of this requirement.

Sincerely,

_________________

_________________

cc: (Federal Regulatory Agency)
Regional Administrator, U.S. EPA, 230 S. Dearborn Street,
Chicago, IL 60604
NOTICE OF WATER QUALITY CERTIFICATION

(Applicant name and address) filed an application with the Department of Natural Resources for water quality certification pursuant to Section 401, Clean Water Act, and Chapter NR 299, Wis. Adm. Code. (Applicant) proposed to (____________________________________________________________________)

The Department has evaluated this activity and determined that this activity will be conducted in a manner which will not violate the standards enumerated in Section NR 299.04 and certification is granted. The following conditions are necessary with respect to the discharge.

1. The applicant shall notify the Wisconsin Department of Natural Resources of its intent to start the discharge at least five business days prior to the beginning of the discharge.

2. Within 5 business days after the completion of the discharge, the applicant shall notify the Department of the completion of the discharge.

3. The applicant shall allow the Wisconsin Department of Natural Resources reasonable entry and access to the discharge site to inspect the discharge for compliance with the certification and applicable laws.

4. (Other conditions as necessary.)

NOTICE OF APPEAL RIGHTS (pursuant to s. 227.48(2), Stats.). Any person whose substantial interest may be affected by the Department's determination may request a hearing within 30 days after publication pursuant to NR 299.05, Wis. Adm. Code.

This determination shall become final in accordance with the provisions of NR 299.05(7), Wis. Adm. Code. The final decision of the Department shall be judicially reviewable as provided under ch. 227, Stats.

For judicial review of a decision pursuant to sections 227.52 and 227.53, Stats., you have 30 days after the decision becomes final to file your petition with the appropriate circuit court and serve the petition on the Department. The petition shall name the Department of Natural Resources as the respondent.

Dated at __________________ Wisconsin.

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For The District Director

Name, Title

cc: (Federal Regulatory Agency)
Regional Administrator, U.S. EPA, 230 S. Dearborn Street
Chicago, IL 60604
WAIVING CERTIFICATION

A public notice is not required for waiving certification. However, there is a requirement to notify the applicant, federal permitting or licensing agency, the EPA Regional Administrator and known interested parties. The following format should be used.

Applicant's Name and Address

Salutation:

The Department of Natural Resources has evaluated your application for water quality certification pursuant to Section 401, Clean Water Act and Chapter NR 299, Wis. Adm. Code.

We have determined that your proposal to (describe activity)(Use a, b, c below)

a. will not result in a discharge and a waiver of certification is granted.

b. does not fall within the purview of the Department's water quality related authorities and a waiver of certification is granted.

c. the discharge from this activity will be regulated by the permit authority under Chapter 147, Stats., Wisconsin Pollutant Discharge Elimination.

Authorization may also be required by (General type - zoning, solid waste, etc.) laws for this activity.

(A paragraph commenting on the activity and recommending specific measure to minimize environmental impacts can and should be added here. The authority and requirement to do so is in s. NR 299.05(3)(c)3.)

NOTICE OF APPEAL RIGHTS (pursuant to s. 227.48(2), Stats.). If you believe that you have a right to challenge the decision stated in the paragraph above, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed.

To request a contested case hearing pursuant to section 227.42, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources.

Dated at __________________ Wisconsin.

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For The District Director

__________________________________
Name, Title

cc: (Federal Regulatory Agency)
    EPA Regional Administrator
DENYING CERTIFICATION

A public notice is not required for denial of certification. However, there is a requirement to notify the applicant, federal permitting or licensing agency the EPA Regional Administrator and known interested parties. The following format should be used:

Applicant's Name and Address

Salutation:

The Department of Natural Resources has evaluated your application for water quality certification pursuant to Section 401, Clean Water Act, and Chapter NR 299, Wis. Adm. Code.

We have determined that there is not reasonable assurance that your proposal to (describe activity:) will comply with the standards enumerated in Section NR 299.04, and certification is denied.

Specifically, the Department finds:

NOTICE OF APPEAL RIGHTS (pursuant to s. 227.48(2), Stats.). If you believe that you have a right to challenge the decision stated in the paragraph above, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed.

To request a contested case hearing pursuant to section 227.42, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources.

This notice is provided pursuant to section 227.48(2), Stats.

Dated at ___________________ Wisconsin.

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For The District Director

___________________________________
Name, Title

cc: (Federal Regulatory Agency)
EPA Regional Administrator
WATER QUALITY CERTIFICATION LANGUAGE FOR CORPS PUBLIC NOTICES

These are the three choices for s. 401 water quality certification language in the Corps of Engineers s. 404 Public Notices.

Choice 1 Waiver:

WAIVER OF CERTIFICATION. The State of Wisconsin, Department of Natural Resources has evaluated this activity for water quality certification pursuant to Section 401, Clean Water Act and Chapter NR 299, Wis. Adm. Code. The Department has determined that

(Choose a, b, or c)

a. no discharge will result from this activity and a waiver of certification is granted. Authorization may be required by _____________ laws for this activity.

b. the activity does not fall within the purview of the Department's water quality related authorities and a waiver of certification is granted. Authorization may be required by _____________ laws for this activity.

c. the discharge from this activity will be regulated by the permit authority under ch. 147, Stats., Wisconsin Pollutant Discharge Elimination. Authorization may also required by ______________ laws for this activity.

The Department (has) (has not) provided comments about the activity and recommended specific measures to minimize environmental impacts.

NOTICE OF APPEAL RIGHTS (pursuant to s. 227.48(2), Stats.). If you believe that you have a right to challenge the decision stated in the paragraph above, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed.

For judicial review of this decision (pursuant to sections 227.52 and 227.53, Stats.), you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. The petition shall name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to section 227.42, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30-day period for filing a petition for judicial review.

Choice 2 Grant or Conditional Grant:

GRANT OR CONDITIONAL GRANT OF CERTIFICATION. The State of Wisconsin, Department of Natural Resources, has evaluated this activity for water quality certification pursuant to Section 401, Clean Water Act and Chapter NR 299, Wis. Adm. Code. The Department has determined that this activity will be conducted in a manner which will not violate the standards enumerated in Section NR 299.04, Wis. Adm. Code and certification is granted. The following conditions are necessary with respect to the discharge:

1. The applicant shall notify the Wisconsin Department of Natural Resources of its intent to start the discharge at least five business days prior to the beginning of the discharge.
2. Within 5 business days after the completion of the discharge, the applicant shall notify the department of the completion of the discharge.

3. The applicant shall allow the Wisconsin Department of Natural Resources reasonable entry and access to the discharge site to inspect the discharge for compliance with the certification and applicable laws.

4. (Other conditions as necessary.)

NOTICE OF APPEAL RIGHTS (pursuant to s. 227.48(2), Stats.). Any person who's substantial interest may be affected by the Department's determination may request a hearing within 30 days after publication pursuant to NR 299.05, Wis. Adm. Code.

This determination shall become final in accordance with the provisions of NR 299.05(7), Wis. Adm. Code. The final decision of the Department shall be judicially reviewable as provided under ch. 227, Stats.

For judicial review of a decision pursuant to sections 227.52 and 227.53, Stats., you have 30 days after the decision becomes final to file your petition with the appropriate circuit court and serve the petition on the Department. The petition shall name the Department of Natural Resources as the respondent.

Choice 3 Request:

REQUEST FOR WATER QUALITY CERTIFICATION. This public notice has been sent to the Wisconsin Department of Natural Resources and is considered by the District Engineer to constitute valid notification of that agency for water quality certification. A permit will not be granted until the Wisconsin Department of Natural Resources has issued or waived Section 401, Certification.

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September 6, 1991

TO: District Directors

3500 (WMC)
PMMS Response: Chapter 10, Water Regulation Handbook
Distribution: All Water Management Staff

FROM: Scott Hausmann - WZ/6

RE: Language for Department Notices of Quality Certification

Here are revisions of the language for Ch. NR 299 Water Quality Certification decisions:

GRANTING CERTIFICATION

A public notice is required for the grant or conditioned grant of certification (if there is no Chapter 30 or 31 action). If there is no Corps notice or if the "request for certification" was used in the Corps notice, the following cover letter and format should be used:

COVER LETTER

Applicant's Name and Address

SUBJECT: Application for Water Quality Certification

Dear ________________:

We are enclosing a Notice of Water Quality Certification, issued by the Department of Natural Resources. State law requires publication of this notice.

The Notice must be turned over to the (Newspaper) for publication as a Class 1 Notice. The cost of publication is to be borne by you. Proof of publication must be made by affidavit of the publisher with copy of the printed notice attached. This proof must be mailed or delivered to the Department of Natural Resources (Address) after the notice has been published.

Your water quality certification becomes final 30 days after publication unless a hearing is requested. We will contact you only if a hearing is requested.

Your application cannot be processed further until completion of this requirement.

Sincerely,

______________________

______________________

cc: (Federal Regulatory Agency)

EPA Regional Administrator
CERTIFICATION

NOTICE OF WATER QUALITY CERTIFICATION

(Applicant name and address) filed an application with the Department of Natural Resources for water quality certification pursuant to Section 401, Clean Water Act, and Chapter NR 299, Wis. Adm. Code. (Applicant) proposes to ________________________________________________.

The Department has evaluated this activity and determined that this activity will be conducted in a manner which will not violate the standards enumerated in Section NR 299.04 and certification is granted. The following conditions are necessary with respect to the discharge:

1. The applicant notify the Wisconsin Department of Natural Resources of its intent to start the discharge at least five business days prior to the beginning of the discharge.

2. Within 5 business days after the completion of the discharge, the applicant shall notify the Department of the completion of the discharge.

3. The applicant shall allow the Wisconsin Department of Natural Resources reasonable entry and access to the discharge site to inspect the discharge for compliance with the certification and applicable laws.

4. (Other conditions as necessary.)

NOTICE OF APPEAL RIGHTS. Any person whose substantial interest may be affected by the Department's determination may request a contested hearing by serving a petition for hearing pursuant to the requirements of section 227.42, Wisconsin Statutes, on the Secretary of the Department within 30 days after publication.

This determination becomes final in accordance with the provisions of NR 299.05(7), Wis. Adm. Code and is judicially reviewable when final. For judicial review of a decision pursuant to sections 227.52 and 227.53, Stats., you have 30 days after the decision becomes final to file your petition with the appropriate circuit court and to serve the petition on the Department. The petition must name the Department of Natural Resources as the respondent.

Dated at _______________ Wisconsin.

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For The District Director

________________________________
Name, Title
WAIVING CERTIFICATION

A public notice is not required for waiving certification. However, there is a requirement to notify the applicant, federal permitting or licencing agency, the EPA Regional Administrator and known interested parties. The following format should be used.

WAIVER

Applicant's Name and Address

SUBJECT: Application for Water Quality Certification

Dear ________________:

The Department of Natural Resources has evaluated your application for water quality certification pursuant to Section 401, Clean Water Act and Chapter NR 299, Wis. Adm. Code.

We have determined that your proposal to (describe activity and then Use a, b, c below)

a. will not result in a discharge and a waiver of certification is granted.

b. does not fall within the purview of the Department's water quality related authorities and a waiver of certification is granted.

c. the discharge from this activity will be regulated by the permit authority under Chapter 147, Stats., Wisconsin Pollutant Discharge Elimination.

Authorization may also be required by (General type - zoning, solid waste, etc.) laws for this activity.

(A paragraph commenting on the activity and recommending specific measure to minimize environmental impacts can and should be added here. The authority and requirement to do so is in s. NR 299.05(3)(c)3.)

NOTICE OF APPEAL RIGHTS. Any person whose substantial interest may be affected by the Department's determination may request a contested case hearing by serving a petition for hearing pursuant to the requirements of section 227.42, Wisconsin Statutes, on the Secretary of the Department within 30 days after the decision is mailed, or otherwise served by the Department.

Dated at ________________ Wisconsin.

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For The District Director

____________________
Name, Title

cc: (Federal Regulatory Agency)
EPA Regional Administrator
DENYING CERTIFICATION

A public notice is not required for denial of certification. However, there is a requirement to notify the applicant, federal permitting or licensing agency, the EPA Regional Administrator and known interested parties. The following format should be used:

DENIAL

Applicant's Name and Address

Salutation:

The Department of Natural Resources has evaluated your application for water quality certification pursuant to Section 401, Clean Water Act, and Chapter NR 299, Wis. Adm. Code.

We have determined that there is not reasonable assurance that your proposal to (describe activity) will comply with the standards enumerated in Section NR 299.04, and certification is denied.

Specifically, the Department finds:

NOTICE OF APPEAL RIGHTS. Any person whose substantial interest may be affected by the Department's determination may request a contested case hearing by serving a petition for hearing pursuant to the requirements of section 227.42, Wisconsin Statues, on the Secretary of the Department within 30 days after the decision is mailed, or otherwise served by the Department.

Dated at __________________ Wisconsin.

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For The District Director

___________________________
Name, Title

cc: (Federal Regulatory Agency)
EPA Regional Administrator

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DATE: October 31, 1991  FILE REF: 3520

TO: District Directors

Insertion: Chapter 10, Water Regulation Handbook

FROM: George E. Meyer AD/5

Distribution: All Program Staff
           Bureau of Leg. Serv.
           Bureau of Law Enf.

SUBJECT: After the Fact Permits Required for Enforcement Actions Where an Activity is Not Effectively Abated or Restored

I have developed this guidance to provide a framework for the uniform application of Ch. NR 301, Wis. Adm. Code, regarding after-the-fact permits (ATFPs). One of the primary purposes of developing NR 301 was to ensure that violations under Chapters 30, 31 and 88 Wis. Stats. which were not abated or restored would be authorized by an ATFP provided they would not cause environmental damage and would meet applicable statutory standards.

Following are a number of reasons why this guidance is necessary:

1) The enforcement and authorizing provisions in the statutes must be administered in harmony to a rational conclusion. Our statutes declare it to be unlawful to complete or maintain various regulated activities without proper authorization (permit or approval). Payment of a fine or forfeiture as a result of an enforcement proceeding does not alter this statutory mandate and end the illegal status of an activity.

2) Sections 30.294 and 31.25, Stats., declare unauthorized activities to be a public nuisance and provide for abatement. These statutory provisions should be enumerated in each violation citation and used in enforcement proceedings as support for abatement or requiring an application for an ATFP.

3) Subsequent enforcement actions are not prohibited unless an activity is abated or permitted [see s. 30.298(1), (2) and (3)].

4) Unless we require an ATFP, simply paying a fine or forfeiture becomes an unauthorized alternative "permit" procedure.

5) Unless we require an ATFP, people are encouraged to circumvent the law. The penalties for unauthorized activities are meant to serve as a deterrent and are an important aspect of our two pronged program (enforcement and authorization).

6) The payment of a fine or forfeiture is usually considerably faster and less expensive than providing the information, engineering and permit fees needed to apply for a permit or approval.

7) Unless we require an ATFP, the public has little or no opportunity to comment on or object to the activity that has taken place.

8) The issuance of a permit allows us to maintain an easily retrievable historical record in our authority index.
that accurately describes a project including its size and location and who is responsible for its maintenance.

Therefore I am establishing this guidance for all Water Regulation and Zoning and Law Enforcement staff to require an ATFP application for a permit (or approval) where unauthorized activities are not fully abated or restored as a result of enforcement action. The application is to be processed in the same manner as any other application, except that conformance with the guidelines established in NR 301 is required and the permit should include appropriate documentation that the applicant initially proceeded without proper authority. Manual Code 4112.1 will be modified to reflect this policy. In any case where the unauthorized activity has not been completed or there is a residual feature that could be recognized as a violation (channel change, pond, seawall, rip rap or some other structure or deposit) ATFPs must be applied for. ATFPs should also be required when a public notice would have been required for a permit to allow riparians or the public an opportunity to object to a project that might adversely effect them. ATFPs should contain any necessary conditions, including requirements to modify a project, to assure compliance with statutory standards and prevent environmental damage. ATFPs are not to be used to simply "rubber stamp" otherwise unacceptable projects. ATFPs should be opposed where applicable statutory standards will not be met.

Notwithstanding the above guidelines, staff may continue to use their discretion whether to proceed with enforcement actions and/or ATFPs for minor violations where abatement or restoration is effectively achieved without formal action (e.g. minor dredging where littoral drift replaces removed material, damaged aquatic vegetation reestablishes itself, where we get voluntary restoration from the "violator", etc.).

I believe implementation of this guidance will lead to far fewer cases where unauthorized activities are left in "limbo" following local enforcement actions (which continues to be the preferred course of action). There will be occasional situations where the courts will not require what we feel is necessary to protect the environment or comply with the statutes. If this should occur, we only have two choices - appeal the decision or accept the court's action as sufficient disposition of the case. Additional enforcement proceedings under s. 30.03 are rarely an option once local enforcement actions have been completed.

In cases where we have reason to believe that local enforcement will not produce a satisfactory result, we should pursue full compliance through proceedings under s. 30.03, Stats.

Drafted by: Bob Sonntag

Reviewed by: Bob Roden
Ralph Christensen
Mike Cain
DATE: March 29, 1993

TO:    Water Regulation & Zoning Staff

FILE REF.: 3550-1

Insertion: Ch. 3 Floodplain/Shoreland Mgt. Guidebook
Ch. 10, Water Regulation Handbook

FROM: Robert Roden WZ/6

Distribution:    WRZ Program Staff

SUBJECT: Program Guidance for Hydrologic Analyses Completed or Approved by the Department of Natural Resources

The following guidelines are established for all hydrologic analyses used in the prediction of flood frequencies related to floodplain studies, dam evaluation studies, dam failure analyses, and Chapter 30 or 31 permit reviews:

1. Methods for hydrologic analyses must be consistent for similar situations found in floodplain zoning, dam hazard ratings, and/or review of Chapter 30/31 permits.

2. The minimum standard for hydrologic analysis will be to calculate flood flows using USGS Regional Regression Equations coupled with cross checking with other basins. Cross checking can be accomplished by simply reviewing the list of similar sized basins with similar basin characteristics already calculated in the USGS Regional Equation Manual.

3. For extremely small basins (less than 2 square miles) a minimum effort may include a TR55 or SCS synthetic hydrograph analysis coupled with a basin comparison or cross check.

4. The level of detail and the methodologies utilized for similar situations (i.e. similar topography, basin size, type of project) should be consistently applied by all program staff. We have the authority and the responsibility to require more detail and/or documentation if sufficient information has not been submitted to meet the requirements of all program areas.

5. Prior to starting a hydrologic analysis all program staff should check for previous studies or ongoing work. Staff should always check the Floodplain Management Community Status Report. If there is an estimate of peak flood flows at that project location that:
   A) has been adopted by the governing municipality in accordance with NR116, or
   B) has been "approved" (see #9. below) by a WZ Engineer, then that data must be used for the project review.

6. If major inconsistencies or errors are noted with the adopted/approved hydrologic information, it may be revised. Prior to using the revised estimate, the reviewing engineer must reconcile the change with the existing data as follows:

   A. If there is an existing water surface model which utilizes the existing hydrologic data, the reviewer must retrieve the deck, make the appropriate changes in the model and supply the deck and
output to the Floodplain Unit. The revised Hydrology may then be used immediately, provided the Floodplain Unit agrees that the revised data is appropriate for adoption by the affected municipality(s) in the local FPZO.

B. If the existing Hydrologic data is not adopted under NR116, but has been 'approved' by a WZ engr., the reviewing engineer must advise that person of the change before proceeding. If the 'reviewer' and the 'approving' engineer disagree on the change, the matter will be resolved by Ken, Bob, and Dick.

7. If hydrologic data is not available for the project site then the engineer may develop his or her own estimate. (see #9 below).

8. All staff members who either initiate themselves or who become aware of the initiation of comprehensive hydrologic studies for large geographic areas or major revisions to past studies must record this information in the WZ integrated data base. This will assure that the entire staff will be made aware of the pending information.

9. At the completion of an analysis, or upon approval of existing data, the predicted flood flow must be entered into the WZ integrated data base. Responsibility for entry of this information as well as the study summary rests with the reviewing engineer and shall be accomplished as soon as possible after approval.

10. Approval of hydrologic data requires that the WZ engineering data base will be updated in the appropriate 'fields' including: the WZ engineer's initials, date of approval, designation for community adoption under NR116, and "pending" study information.

Requested By: Robert Watson & Richard Knitter

Reviewed By: Ken Johnson
P. Scott Hausmann
Robert Watson
Richard Knitter
Larry Larson
Early this year the Supreme Court decided Stoesser et al v. Shore Drive Partnership. As you are aware, this case speaks to the transfer of riparian rights. Since there have been several questions from staff and outside attorneys alike concerning this case, the answers to which were not entirely clear to us, we felt it necessary to request clarification from the Bureau of Legal Services. Attached is a memo from Jim Kurtz discussing this case and the implications it may have on our program. Basically, the memo interprets the decision to have no or little effect on our program administration. Permit applications which we previously required fee ownership for must still show fee ownership. None-the-less, we suspect the case will come up in your future dealings with applicants and their attorneys.

Attachment
DATE: May 18, 1993

TO: Robert Roden - WZ/6

FROM: James Kurtz - LC/5

SUBJECT: Interpretation of Stoesser et al. v. Shore Drive Partnership

You recently requested an interpretation of Stoesser et al. v. Shore Drive Partnership, Case No. 91-0903 (January 19, 1993). Your questions involve the effect of this case on the transfer of riparian rights. Stoesser discussed the rights of an easement holder for access to navigable water. There is language in this case which some might interpret to have again allowed the unfettered placement of structures such as piers by non-riparian, back lot owners who have easements for either access alone or for the placement of structures. I believe that the case is more limited than that.

Stoesser involved riparians who were seeking only the right to use the lakeshore for "bathing, boating or kindred purposes". They specifically withdrew their request to place a pier adjacent to the easement. The court held that the back lot owners had riparian rights; interpreting such in this case to be a right of access. However, the court held that they are not riparian owners for statutory purposes. The following quote is illustrative:

"Cassidy and de Nava both dealt with the claim that an easement holder was a riparian owner for statutory purposes. In both cases the court of appeals correctly held that an easement does not confer upon its holder the status of riparian owner." slip op. pp. 7-8

Accordingly, the backlot easement holder can do whatever the easement allows provided such does not require compliance with a statutory provision which necessitates the status of one being a riparian owner. I have listed below those areas in which the status of riparian owner is required for the placement of a structure or for other activities involving navigable waters:

s. 30.12, Stats. - placement of structures generally
s. 30.121, Stats. - boat houses and houseboats
s. 30.13, Stats. - piers
s. 30.18, Stats. - diversions for irrigation or agriculture
s. 30.195, Stats. - changing stream courses

Other privileges authorized by ch. 30 Stats, are not dependent on riparian ownership or proprietorship. These include the following:

s. 30.126, Stats. - fishing rafts
s. 30.18, Stats - all other diversions
s. 30.19, Stats - enlargements
s. 30.20, Stats. - removal of material from beds of navigable water
s. 30.772, Stats. - placement of individual moorings
s. 30.773, Stats - designated mooring areas
As you can see, certain riparian privileges require riparian ownership status. Other riparian privileges simply require that the riparian consent, as is the case with the latter list. Accordingly, one does not need to be a riparian owner to place a mooring buoy as long as he or she has the permission of the riparian. The same is the case for the placement of fishing rafts. Presumably, where ss. 30.18, (other than for irrigation and agriculture) 30.19 and 30.20 do not statutorily require riparian ownership status, the riparian owner could transfer this privilege to another by easement.

You have listed in your opinion request a number of activities which you ask could be transferred by easement. The Stoesser case made it clear that those activities generally associated with access to the water and not requiring a permit from the Department dependent on ownership status, can be transferred by easement. Accordingly, the right to use the shoreline and have access to the waters, the right to have water flow to the land without artificial obstruction and the right to reasonable use of the water for domestic and recreational purposes could presumably be transferred by easement. The right to construct a pier is still dependent on riparian ownership status and could not be transferred by easement. Without having done a great deal of research on the matter, it is my view that the right to any lands formed by accretion or reliction is dependent on ownership status and could not be transferred by easement.

You also ask several specific questions. I will repeat those questions and attempt to give an answer.

1. Section 30.12 Wis. Stats. allows a riparian owner to place structures for the owner's use. Formerly we have relied upon Cassidy and assumed that the right to place structures is reserved to riparian owners. Are we correct in assuming that the right to place structures under s. 30.12 Wis. Stats. cannot be transferred by easement?

As noted above, the placement and maintenance of structures is specifically limited by the language of s. 30.12 Stats., to riparian owners. Both Cassidy and de Nava remain good law to the extent that an easement holder is not a riparian owner. Accordingly, an easement holder still does not have the right to place a structure when a structure permit is required under s. 30.11, Stats.

2. Section 30.13 Wis. Stats. allows a riparian proprietor to place a pier or wharf in a navigable body of water. Formerly, we have assumed that a riparian proprietor is the same thing as a riparian owner, and have taken the position that only those with fee title ownership may place or cause a pier to be placed. How does this square with the court's statement in Stoesser? Can this right be severed by easement? If the answer is yes, how is our administration of Section 30.131 affected?

The de Nava case made it quite clear that an easement holder is not a riparian proprietor. In effect, it held that a riparian proprietor was the same as a riparian owner. Stoesser's language indicating that riparian rights could be transferred does not overrule the statutory requirement of riparian proprietorship or ownership prior to eligibility for the placement of a structure. As with rights under 30.12 Stats., the issue of the placement of a pier under s. 30.13, Stats., becomes somewhat more clouded because Stoesser indicated that riparian rights could be transferred by either an easement or license. We have indicated that riparian rights could be transferred by a license. (December 19, 1991 Program Guidance - Riparian Berths and Mooring) In other words, a riparian owner could allow another via a license to use a pier placed by that riparian owner. Stoesser seems to say that a similar transfer could take place by easement. Obviously, the issue has become a more difficult one.

The Department's traditional recognition of licenses for the authority to place a pier is based on Colson v. Salzman, 272 Wis. 397 (1956). The Colson Court's position is summarized in de Nava v. DNR 140 Wis. 2d. 213, 222 (1987) as follows:

"It is worth noting that the Colson's court added, however, that the riparian owner could 'permit' (presumably by way of a license) the defendant and others to construct a pier, subject to the superior rights of the state." (footnote 8)
Neither s. 30.12 nor s. 30.13, Stats., were in effect at the time of the Colson decision. However, s. 30.02 Stats., which was the predecessor to s. 30.12 Stats., was in effect and did include the same requirement as s. 30.12 Stats., that the pier or structure be for the use of the riparian owner. Subsequent to the Colson decision, s. 30.13, Stats, was enacted (1959), which includes the requirement that the pier be constructed by the riparian proprietor.

Department policy, consistent with Colson, has recognized the use of short-term licenses for the transfer of the right to place a pier. The Department has construed the short-term, revocable status of a license as being sufficient assurance that the pier is placed with the permission and to the benefit of the current riparian owner and therefore, for that riparian owner's use.

A more difficult situation arises with easements. It is often difficult to distinguish an easement from a license in real property, but they are distinct in principle. An easement always implies an interest in the land in and over which it is to be enjoyed, whereas a license merely confers a personal privilege to do some act or acts on the land without possessing an interest in the property. Easements tend to be of a long-term nature and run with the land. A riparian owner can bind subsequent riparian owners to the terms of the easement, while a license does not have such effect.

In view of the above, it is my opinion that the use of an easement to convey the right to place a pier or wharf would be violative of the provisions of ss. 30.12 and 30.13, Stats. We cannot construe a right to place a pier which is transferred by easement as satisfying the riparian owner placement requirement of s. 30.13, Stats., or the requirement that the structure be placed for the owner's "own use" under s. 30.12, Stats. The irrevocable right to place a pier authorized by an easement would bind and may be detrimental to subsequent riparian purchasers. Thus while Stoesser allows for the use of easements to transfer riparian rights generally, their use for the transfer of the right to place piers would not be consistent with ss. 30.12 and 30.13 Stats.

3. Section 30.18 Wis. Stats. allows a riparian to divert water for the purpose of agriculture or irrigation. Can this right be severed by easement?

The answer to this question is noted above. In essence, it is no.
The facts are not in dispute. The plaintiffs-appellants (hereinafter "subdivision owners") are non-riparian landowners in the O-Tan-Kah Subdivision. The defendants-respondents (hereinafter "partnership") are riparian landowners along Lake Beulah having purchased its riparian land on September 15, 1989. The partnership operates a bar and restaurant known as the "Dockside." The subdivision owners claim the right to use the partnership's lakeshore to exercise riparian rights that were reserved in a 1939 warranty deed from their predecessors in title to the partnership's predecessor in title. The relevant portion of the deed states:

the parties of the first part reserve for themselves, their heirs and assigns and the owners in O-Tan-Kah subdivision and any owners along the channel, the use of the channel as a means of ingress and egress, and also reserving to themselves and such owners, the right in common with the parties of the second part for themselves and guests to use the lake shore for bathing, boating or kindred purposes. . . .

Each year after the 1939 deed was executed the partnership and its predecessors in interest installed a pier on the lakeshore frontage. In the spring of 1989, the subdivision owners, for the first time since the execution of the 1939 deed, exercised the riparian rights they claimed by erecting a pier abutting the shore of the partnership's property. On April 7, 1990 the subdivision owners again erected their pier on the partnership's lakeshore. That same day the partnership removed the subdivision owners' pier claiming the subdivision owners had no right to erect a pier on its property.

The subdivision owners commenced this action on May 25, 1990, alleging that they had "lake rights . . . to swim, dock boats, and erect a pier along the shores of Lake Beulah." They no longer claim the right to maintain a pier. The subdivision owners sought declaratory relief setting forth their rights in the lake frontage of Lake Beulah and an injunction to prevent the partnership from placing a pier or other structure which would interfere with the subdivision owners' rights to use the lakeshore. The subdivision owners also requested compensatory and punitive damages.
The partnership moved for summary judgment arguing that riparian rights cannot be conveyed by easement. The circuit court granted the partnership's motion for summary judgment. The circuit court stated, "the case law has made it clear that a non-riparian owner has no rights, no riparian rights." The circuit court went on to rule that to the extent the deeds purported to convey riparian rights to non-riparian owners they were null and void and without force. The circuit court dismissed all of the causes of action brought by the subdivision owners.

The subdivision owners appealed. The court of appeals certified the following issue to this court: "Does prior case law of the Wisconsin Supreme Court and the Wisconsin Court of Appeals preclude a non-riparian owner's easement right to use a lakeshore for 'bathing, boating and kindred purposes?" We accepted certification from the court of appeals.

When reviewing the grant of a summary judgment motion, this court is required to apply the standards set forth in sec. 802.08, Stats. just as the trial court was to apply those standards. Voss v. City of Middleton, 162 Wis. 2d 737, 748, 470 N.W.2d 625 (1991). We are not bound by a lower court's finding based upon undisputed evidence when that finding is ultimately a conclusion of law. N.N. v. Moraine Mut. Ins. Co., 153 Wis. 2d 84, 91, 450 N.W.2d 445 (1990). The facts in the instant case are undisputed. The certified issue presents a question of law which this court decides de novo.

A riparian owner is one who holds title to land abutting a body of water. Colson v. Salzman, 272 Wis. 397, 400, 75 N.W.2d 421 (1956); Doemel v. Jantz, 180 Wis. 225, 230, 193 N.W. 393 (1923). Riparian owners have certain rights, known as riparian rights, based upon title to the ownership of the bank or upland. Colson v. Salzman, 272 Wis. 397, 400, 75 N.W.2d 421 (1956); Doemel v. Jantz, 180 Wis. 225, 230, 193 N.W. 393 (1923). Riparian rights are not common to the citizens at large, but exist as natural and inherent incidents of the ownership of riparian land. Doemel, 180 Wis. at 231; 78 Am. Jur. 2d Waters sec. 262 (1975). The riparian rights relevant to this case are the right of access to a lake and the privilege that goes along with that right to use the lake and lakeshore for bathing, boating and kindred purposes.

None of the subdivision owners who are plaintiffs in this case own riparian land. The subdivision owners claim riparian rights through the easement reserved in the 1939 deed. It is clear that the mere fact that one owns property abutting a natural body of water presumptively confers certain rights. Mayer v. Grueber, 29 Wis. 2d 168, 174, 138 N.W.2d 197 (1965). However, one who acquires land abutting a body of water may acquire no more than is conveyed by his deed. Id.

In the instant case, the partnership claims exclusive rights to use its lakeshore. However, the partnership's predecessor in interest, granted an easement to the subdivision owners allowing them to use the lakeshore for bathing, boating and kindred purposes. This easement was a part of the partnership's predecessors deed which was recorded in the Walworth County Register of Deeds office on March 23, 1939. The easement was recorded and gave notice to subsequent purchasers of the subdivision owners rights. The easement bound future owners.

An easement has been defined in Wisconsin as a liberty, privilege, or advantage in lands, without profit, and existing distinct from the ownership of the land. Colson, 272 Wis. at 401. In the case of an easement title does not pass but only the right to a limited use of the land of another. Id. The subdivision owners did not become riparian owners based upon the easement; but they did obtain the right to use the partnership's lakeshore to access Lake Beulah for bathing, boating and kindred purposes.

All members of the public have the right to use Lake Beulah for swimming, bathing and boating purposes subject to regulation by the legislature and state agencies. The state holds the lake bed and water in trust for the public. However, members of the public do not have the right to access Lake Beulah by way of the partnership's private property. The easement allows the subdivision owners access to Lake Beulah via the partnership's property to exercise their public rights.
Because the easement was created by deed we must look to that instrument in construing the relative rights of the parties. Hunter v. McDonald, 78 Wis. 2d 338, 342-43, 254 N.W.2d 282 (1977). The use of the easement must be in accordance with and confined to the terms and purposes of the grant. Id. 78 Wis. 2d at 343.

In this case the deed reserved for the subdivision owners the right "to use the lake shore for bathing, boating or kindred purposes. . . ." Since one cannot bathe or boat on the shore this language was obviously intended to allow the subdivision owners access to Lake Beulah from the partnership's lakeshore. The subdivision owners seek to use their easement for the purposes expressly stated in the deed and must be allowed that right.

The partnership argues that riparian rights in a natural lake are exclusively vested in the riparian land owner and cannot be transferred by easement. The partnership asserts that the easement granting riparian rights to the subdivision owners is null and void as contrary to Wisconsin law. We disagree.

Wisconsin follows the general rule that riparian rights can be conveyed to non-riparian owners by easement. Mayer, 29 Wis. 2d at 175 quoting Burby, Real Property sec. 18; Williams v. Skyline Development Corp., 288 A.2d 333 (Md. 1972); Thurston v. City of Portsmouth, 140 S.E.2d 678, 680 (Va. 1965); Mianus Realty Co. v. Greenway, 193 A.2d 713, 715 (Conn. 1963); Fitzstephens v. Watson, 344 P. 2d 221, 229 (Or. 1959); 78 Am. Jur. 2d Waters sec. 278 (1975); 1 Waters And Water Rights, secs.-7.04(a)(1), 7-04(a)(2), 7.04(a)(3) (Robert E. Beck, ed. 1991).

The partnership relies on Colson, Cassidy, and de Nava v. Dept. of Natural Resources, 140 Wis. 2d 213, 409. N.W.2d 151 (Ct. App. 1987), for the proposition that riparian rights cannot be transferred by easement. However, these cases do not support the partnership's argument. The cases relied on by the partnership dealt with the issue of whether an easement holder was a riparian owner. In the instant case, the subdivision owners do not argue that they are riparian owners, but that the easement conveyed the riparian right of lake access to them.

In Colson, the court held that an easement does not confer the status of riparian owner upon the easement holder. Colson, 272 Wis at 401. The court noted that the riparian owner could permit nonriparian owners to construct piers off its lakeshore subject to the superior rights of the state and federal government. Id. Colson provides support for the rule set forth in this case that riparian rights can be conveyed to non-riparian owners by easement. Cassidy and de Nava both dealt with the claim that an easement holder was a riparian owner for statutory purposes. In both cases the court of appeals correctly held that an easement does not confer upon its holder the status of riparian owner. Cassidy, 132 Wis. 2d at 161; de Nava, 140 Wis. 2d at 221.

The statement in de Nava "that the grantee of an easement acquires no riparian rights in natural waters, even if the easement purports to grant such rights," misstates the holding in Colson and the rule of law in Wisconsin. Colson held that riparian ownership cannot be conferred by easement. Colson permitted the continued use of a riparian right pursuant to an easement.

The rule of law in Wisconsin is that a riparian owner may grant or reserve an easement for access to a lake. The easement does not confer any ownership rights on the easement holder. However, the easement does convey an interest in the land to use the land in accordance with the terms of the easement. Riparian rights can be conveyed by easement to non-riparian owners.

Public policy supports the rule that riparian rights can be conveyed by easement. A deed, like any instrument, should not be rewritten by the court. If the court could rewrite or invalidate private contractual agreements, it would destroy the certainty upon which contracting parties are entitled to rely.

There are many non-riparian landowners in Wisconsin with lake access easements similar to the one in the present case. A rule of law validating lake access easements protects the clear expectations of non-riparian
landowners who have relied on these easements for many years. The rule that riparian rights can be conveyed by easement carries out the obvious intent of the parties who entered into lake access easements.

We conclude that riparian rights can be conveyed by easement to non-riparian owners. In the instant case, the intent of the parties was that the subdivision owners have access to Lake Beulah by way of the partnership's property. The easement is valid and reserved for the subdivision owners the right of access to Lake Beulah.

For the reasons set forth we reverse the judgment of the circuit court and remand the cause for further proceedings not inconsistent with this opinion.

By the Court: The judgment of the circuit court is reversed and the cause remanded.

1 Strictly speaking, a riparian owner is one whose land abuts upon a river and a littoral owner is one, whose land abuts upon a lake. 78 Am. Jur. 2d Waters sec. 260 (1975). However, most Wisconsin cases make no distinction in applying the terms "littoral" and "riparian." Mayer v. Grueber, 29 Wis. 2d 168, 174, 138 N.W.2d 197 (1965). In Wisconsin the term "riparian" is acceptable as to land abutting upon either rivers or lakes.

2 Riparian rights are well defined in Wisconsin law. They include: the right to reasonable use of the waters for domestic agricultural and recreational purposes; the right to use the shoreline and have access to the waters; the right to any lands formed by accretion or reliction; the right to have water flow to the land without artificial obstruction; the limited right to intrude upon the lakebed to construct devices for protection from erosion; and the right now conditioned by statute, to construct a pier or similar structures in aid of navigation. Cassidy v. Dept. of Natural Resources, 132 Wis. 2d 153, 159, 390 N.W.2d, 81 (Ct. App. 1986).

3 An easement can be created by a reservation or any language in a contract, deed or will expressing an intent to create an easement. 1 The American Law of Real Property sec. 6-.02[5][al] (Arthur R. Gaudio ed. 1992); 3 Richard R. Powell, The Law of Real Property sec. 407 (1992); William E. Burby, Real Property sec. 27 (3rd ed. 1965). An easement can also be created by implication, prescription or adverse use. 1 The American Law of Real Property sec. 6.02[5].
DATE: June 22, 1993  
FILE REF: 3500

TO: WZ District Managers  
    Water Management Specialist  
    Water Regulation Section staff  
    Bureau of Legal Services

Insertion: Ch. 10 Water Regulation Handbook

FROM: Robert Roden - WZ/6

SUBJECT: Formulation of program guidance

Over the years the Department has developed numerous program guidance which aid us in our attempt to uniformly interpret statutes and codes. Some of these guidance have been very complex and taken exceptionally long periods of time to develop. Others have ended up generating lots of staff frustration and still lacked the appropriate quality control. In order to shorten the time it takes to bring an issue to closure and in order to improve the overall quality of our program guidance material I am amending our program guidance process. For instances where a program guidance is needed and appropriate, procedures include:

A. Logging and Tracking. All program guidance request will be assigned a Program guidance number and will be logged and tracked by the Bureau Program Assistant. All existing program guidance will also be assigned a program guidance number and will be indexed by subjects addressed for easy reference. Copies of the updated index will be distributed to holders of the Water Regulation handbook on a semi annual basis.

B. Routine request. From time to time, there will be issues that are of immediate concern that can be easily answered by the Bureau. For most of these issues full input from the program management team is unnecessary. In such cases the appropriate section will assign and develop the program guidance and seek district input. District input will generally consist of soliciting a representative district to comment at the first draft stage.

C. Program Management Team request. The program management team (PMT) may also identify issues that need to be addressed through program guidance. The PMT will keep a running list of issues that need to be resolved and assign a priority to each item. Needed guidance that can be easily addressed will be handled by the Bureau/Section with appropriate input from districts.

D. Complex request. These types of guidance are generally those where there is no black and white law on the issue and the case law does not give us sufficient direction. In other words, these issues are those where the program has some discretion on the direction it takes. Complex or difficult to resolve program guidance will be assigned a Bureau project manager who will have the responsibility of developing individual program guidance. The project manager's responsibilities are two fold; first, work with other supervisors to select a drafting team to develop the guidance and second, represent the PMT's interest in formulation of the guidance.

The Drafting team will be selected based upon a variety of criteria:

a) Select individuals with program knowledge concerning the issue to be addressed.

b) Teams should be small to insure that logistics don't get cumbersome. Generally no larger than four people.

c) Since we believe that diversity on the team will lead to stronger better reasoned documents, the team should have a diverse background. Elements that contribute to diversity are 1) station (central office,
district, area) 2) program (Water Reg, Floodplain Zoning, Shoreland Zoning, Dam Safety) 3) discipline (Biologist, PPA, Engineers)

d) Where appropriate we should try to involve a member of the WCCA in the drafting team.

The Drafting team will be responsible for putting the document together and submitting it to the project manager within 60 days of assignment. During formulation of the guidance, the project manager is responsible for guiding the team and making sure the project is completed on time. The suggested steps for this process are as follows:

- Project manager reviews the issue within the team as necessary.
- Drafting team selects a lead worker responsible for putting the document together.
- Drafting team raises issues that cannot be resolved among the team and prepares an outline of the suggested reply.
- Project manager resolves disputes and finalizes outline.
- Drafting team prepares guidance.
- Project manager reviews and amends first draft.

After the guidance is complete the project manager will submit the guidance to the Bureau for review. The Bureau will either suggest amendments to the document and work with the project manager to develop a final copy with signatures or schedule the issue to be reviewed by the PMT.

The PMT will resolve remaining issues as appropriate and recommend solutions. The Bureau Director will either accept the PMT recommendation or decide the course of action necessary.

Drafted by: Ken Johnson

Reviewed By: Larry Larson
Scott Hausmann
DATE: November 22, 1993

PMMS Response
Insertion: Chapter 10 Water Regulation Guidebook

TO: WZ Program Managers
    WZ Specialists
    Water Regulation Section Staff

FROM: Scott Hausmann

SUBJECT: Court of Appeals Decision on Riparian Rights and Easements
         REPLACES OCTOBER 29, 1993 TRANSMITTAL MEMORANDUM

Attached is a recent unpublished Court of Appeals decision that affirms the 1899 Wisconsin Supreme Court
decision, Village of Pewaukee v. Savoy. It holds that the government has the riparian rights associated with
government (public) roads contiguous to waterways, regardless of whether the government holds outright title or
an easement.

This decision did not address, or overrule, the requirement stated in prior cases that certain riparian rights can
only be exercised by a riparian owner (ownership being in the form of fee title). Furthermore, because the
decision is unpublished, it sets no statewide precedent and its effect is limited to the Town of Maplehurst case
itself. Therefore, we will continue to operate under the general rule that easement holders are not eligible to
place piers or to apply for permits as a riparian owner or proprietor.

c: Mike Cain - LC/5
   Mike Lutz - LC/5
COURT OF APPEALS
DECISION
DATED AND RELEASED

SEPTEMBER 28, 1993

A party may file with the Supreme Court a petition to review an adverse decision by the Court of Appeals pursuant to s. 808.10 within 30 days hereof, pursuant to Rule 809.62(1)

NOTICE:
This opinion is subject to further editing. If published, the official version will appear in the bound volume of the Official Reports.

No. 92-2899

STATE OF WISCONSIN
IN COURT OF APPEALS
DISTRICT III

TOWN OF MAPLEHURST,

Plaintiff-Respondent,

v.

DARRELL W. HOWSDEN, SR.,
IRMA HOWSDEN,
MARK NOSKO
and DEBRA VISSE,

Defendants-Appellants

APPEAL from an order of the circuit court for Taylor County: GARY L. CARLSON, Judge. Affirmed.

Before Cane, P.J, LaRocque and Myse, JJ.

PER CURIAM. Several owners of a real estate appeal a trial court order declaring that the Town of Maplehurst owns the riparian rights associated with a town-owned road lying adjacent to and terminating on the Black River. Appellants' parcels lie on both sides of the road. In prior proceedings involving the town and appellants, the trial court ruled that the town had acquired the road by adverse possession by operation of sec. 80.01(2), Stats., and by authority of sec. 80.01(4), Stats. The trial court also then enjoined appellants from obstructing the use of the road, including any acts designed to mislead the public into believing that the road was a private one. Appellants had claimed ownership of the road before the trial court declared the town's interest.

In the new trial court proceedings, which appellants appeal, the town sought to hold the appellants in contempt for constructing an ice wall across the road. The town also sought amendment of the injunction to bar appellants from blocking the public's right of ingress and egress to the Black River, thereby raising the issue of riparian rights. Appellants make four arguments on appeal: (1) The town does not own the riparian rights associated with the road; (2) the trial court violated principles of res judicata by considering the riparian rights
issue; (3) the town's failure to join the state as a necessary party invalidated the court's order; and (4) the motion for contempt's failure to provide direct evidence of contempt violated due process. We reject these arguments and affirm the trial court order.

The trial court correctly ruled that the town owned the riparian rights associated with the road. In Village of Pewaukee v. Savoy, 103 Wis. 271, 79 N.W. 436 (1899), the Wisconsin Supreme Court laid down a universal rule applicable to riparian rights associated with government-owned roads lying contiguous with bodies of water. The court held that the riparian rights belonged to the government, irrespective of whether the government's interest in the road was in fee or merely an easement. Id. at 278-79, 79 N.W. at 438-39. In other words, if the government acquired only an easement, it nonetheless acquired the property's riparian rights, despite the common-law rule that easement holders generally have no riparian rights. Here, the town acquired an interest in the road. Under Savoy, this acquisition furnished the town the full riparian rights by operation of law, regardless of the nature of the interest it acquired in the road itself.

We reject appellants' argument that the trial court violated the rules of res judicata. This doctrine prevents the litigation of matters that the parties did litigate or should have litigated in earlier proceedings. Schaeffer v. State Personnel Comm'n, 150 Wis. 2d 132, 138-39, 441 N.W.2d 292, 295 (Ct. App. 1989). Here, the town acquired the riparian rights by operation of law, not by operation of the trial court's original judgment. When the trial court issued the order regarding the riparian rights, the court was merely formally declaring those rights that the town had already acquired under the Savoy doctrine. The fact that the first judgment did not expressly mention riparian rights did not in any way deprive the town of rights it acquired by operation of law. Moreover, the order supplementing the judgment was more in the nature of enforcing the rights accruing under the judgment, not in the nature of amending the judgment.

The town's failure to join the state in the suit does not affect the validity of the UW court's ruling. Section 803.03(l) and (2), Stats., states the criteria for joining a necessary party. In general, these provisions require joinder of parties (1) whose interests the judgment might impair, (2) whose nonjoinder might prevent the existing parties from obtaining complete relief, or (3) whose absence might expose the existing parties to multiple liability. Here, appellants have provided no persuasive reason why the town had an obligation to join the state in a case adjudicating the town's, not the state's, riparian rights. Appellants have not shown how the state's joinder would meet any of the statute's concerns. Moreover, the state did participate in the trial court proceedings as amicus curiae, filing a brief in support of the town's legal position. The state has also filed an amicus brief on appeal supporting the town's legal position. In neither case has the state asserted an interest that it believed made it a necessary party under the statutory criteria. Under these circumstances, where the state endorsed the town's legal position, appellants have not established prejudice from the town's failure to join the state as a formal party. See sec. 805.18, Stats.

Finally, we reject appellants' argument that the town's contempt motion was constitutionally inadequate for containing insufficient facts to identify appellants as the persons who violated the trial court's injunction. Appellants moved the trial court to dismiss the town's motion on that basis. However, the trial court declined to address appellants' motion to dismiss. Rather, the trial court held the motion in abeyance pending the court's resolution of the riparian rights question. Appellants then appealed before the trial court could address their motion to dismiss. Under these circumstances, the adequacy of the town's contempt motion is not properly before us on appeal.

In any event, we conclude that the town's contempt motion was adequate. The motion and supporting documents stated on their face that the town did not know who had committed the contemptuous acts. According to appellants, the trial court should have dismissed the motion on its face for lacking direct evidence of appellants' guilt. This argument lacks merit. Because of the parties' prior disputes, the town had strong circumstantial evidence that appellants were the ones who had committed the contemptuous acts. Although the town's motion admitted that the town did not have direct evidence of the perpetrators' identities, proof of identity can be established by circumstantial evidence. The pleadings consequently stated a basis for a claim of
contempt.

*By the Court.*—Order affirmed.

This opinion will not be published. *See* Rule 809.23(1)(b)5, Stats.
DATE: August 18, 1997       FILE REF: 3550

TO: Water Management Specialists
    Regional Aquatic Habitat Experts
    Rivers & Regulations Section

FROM: Mary Ellen Vollbrecht, FH/6

SUBJECT: Referred File Procedure - Revision

Attached is a very slightly revised memo on our referred file procedure. Please keep it in your Water Regulation Handbook (chapter 10).

I'm re-sending the memo because we've received several files recently without background memos. The one-page summary of the case is crucial to make the most efficient use of Mike Cain's time and the time of other attorneys who will be assigned to help him out.

The only change to the memo is to add witness names, specifying what they would testify and any schedule conflicts. (And correcting the handbook chapter reference.)

Thanks for your cooperation!
DATE:        August 18, 1997                           FILE REF: 3550

HANDBOOK CH. 10

TO:    Water Management Specialists Regional Aquatic Habitat Experts Rivers & Regulations Section

FROM: Mary Ellen Vollbrecht, FH/6

SUBJECT: Referred File Procedure

Uniform, complete information in referred files - and consistent, streamlined review of cases - will help us resolve contested cases as quickly and effectively as possible. The information below reiterates our existing process for newly involved staff - and is intended to help add some additional efficiency and consistency.

Background
Files are referred for contested case hearings in four situations (case types):
1. a decision to deny a permit for an activity requiring public notice
2. a decision that substantive objections can't be informally resolved (project could be authorized)
3. a decision to seek administrative enforcement of a violation (highly technical or complex cases or cases that for other reasons do not go through local court)
4. appeal of department decision (prompted by copy of Secretary's letter granting hearing)

The referred file provides background for administrative law judges, Department administrators and legal counsel.

Three principles to keep in mind when preparing and reviewing referred files:
- Ensure complete, well organized information
- Ensure consistency
- Exhaust persuasive opportunities

We routinely try to convince applicant to modify the project or use a different way to achieve their purpose. Where we are not opposed, we should also routinely bring applicants and objectors together to clarify and address objections to the extent possible. This step can result in improved public interest protection, efficient hearing preparation or withdrawal of objections.

Review Process

1. WMS prepares brief case summary (one or two pages) and file material; sign off, briefing of, or copy of summary to, basin leader, regional expert and/or media leader (TO BE DETERMINED BY REGION).

2. Send package to statewide case manager (Elly Lawry, FH/6) for log in and subsequent tracking. Case manager consults section chief for assignment of section reviewer and routes file to reviewer.

3. Section reviewer checks file for clarity, completeness (evidence for jurisdiction, authority and decision, persuasion efforts), statewide consistency and additional persuasion ideas. Discuss policy issues and persuasion options with WMS and section chief. Sign off on case summary and send to legal counsel. Copy case summary
(without attachments) to bureau director and division administrator. For enforcement cases, brief division administrator and bureau director.

4. Legal counsel reviews file for completeness, legal consistency, remaining persuasive opportunities. Determine priority and route to the Division of Hearings and Appeals.

A list of file contents and outline of the case summary is attached. Be sure to use the referred file checklist in chapter 10 of your Water Regulation Handbook.

cc: Regional Water Media Leaders
    Water GMU Leaders
    Lee Kernen, FH/4
    Mike Cain, LC/5
OUTLINE FOR REFERRAL MEMO

To: Eleanor Lawry, FH/6

From: Joe Smith, XXR

Re: Case (person's) Name Case Type (denial, objections, enforcement, appeal) Docket Number

1. Fact situation
   A. Actual or proposed waterway/wetland activity
   B. Name, location and description of waterway/wetland
   C. Public interest functions uses of waterway/wetland

11. Decision rationale and summary of evidence
   A. Jurisdiction (how do you know? witness name)
   B. Public interest impacts (what are they? how do you know? witness names)
   C. Other issues to be decided at hearing (e.g., process? witness names)
   B. Applicant or objectors perspective as we understand it
   C. Any other involved parties and their interests

IV. Chronology
   A. initial/complete application date(s)
   B. decision date
   C. other key dates
   D. persuasive efforts

V. Witness data (names, availability in next three months)
CORRESPONDENCE/MEMORANDUM

DATE: October 29, 1997

TO: Division Administrators, Bureau Directors, Regional Directors, Regional Media Leaders

FROM: Jim Kurtz - LS/5

SUBJECT: Guidance on Conducting Inspections Following Trespass Law Changes

My staff has recently been apprised of concerns raised by program staff in central office and in the regions concerning their ability to conduct inspections on private property without being issued a citation for trespass. The concerns apparently stem from recent publicity about changes to the trespass law which became effective on July 11, 1996 and press accounts about a county zoning administrator who was cited for trespass after inspecting private property for compliance with the county's zoning ordinance for junkyards.

Attached is a memorandum providing additional background about those concerns, the changes to the trespass law and the relationship between those changes and the specific statutory authority for Department staff to conduct inspections in various program areas. Based on the attached analysis, please advise your staff who conduct inspections pursuant to statutory authority to use the following guidelines in conducting those inspections.

Department staff who conduct inspections on private property pursuant to specific statutory authority should carry a copy of the statutory provisions with them in the event their authority to conduct inspections on private property is challenged by the owner or occupant of the property inspected.

In most instances, Department inspections can and should be conducted after notifying the property owner or occupant (and explicitly or implicitly securing his or her consent to the inspection).

If the inspection has not been scheduled in advance with the consent of the property owner or occupant, Department staff should attempt to identify the owner or occupant of the property to be inspected in advance of, or upon arrival at, the property and obtain the consent of property owner or occupant to conduct an inspection. (Showing the property owner or occupant a copy of the statutory authority for the Department to conduct the inspection will usually result in consent being given to enter and inspect the property.)

If consent to enter the property is refused, Department staff should seek a special inspection warrant under ss. 66.122 and 66.123, Wis. Stats., to inspect the property. Procedures for obtaining a special inspection warrant are outlined in Manual Code 4191.5.

If, during the course of conducting an inspection, the property owner or occupant notifies the Department staff that he or she is withdrawing consent to remain on the property, Department staff should leave the premises as requested. If further inspection of the property is required, Department staff should seek a special inspection warrant under ss. 66.122 and 66.123, Wis. Stats., for conducting the remainder of the inspection.

In the event that the property owner or occupant cannot be located or cannot be contacted to provide consent, Department staff should consult with their supervisors and program attorney to determine whether and under what conditions an inspection may be conducted.

Following these guidelines should minimize any potential conflicts associated with the Department staff.
conducting authorized inspections, in light of the "new" trespass law. If there are additional questions about this
guidance, please have your staff contact their respective Bureau of Legal Services program attorney for
assistance.

Attachment
CORRESPONDENCE/ MEMORANDUM

STATE OF WISCONSIN

DATE: October 29, 1997

TO: Jim Kurtz - LS/5

FROM: Tom Steidl - LS/5

SUBJECT: Proposed Guidance on Inspections

Recently, Department staff have raised concerns about their authority to conduct inspections of private property in light of changes to the trespass law (s. 943.13, Wis. Stats.) and the publicity associated with a case in which a county zoning administrator was cited for violating the "new" trespass law. The purpose of this memo is to provide general guidance to Department staff who conduct inspections as part of their program responsibilities, in light of the changes to the trespass law. [NOTE: This guidance does not apply to or address the authority of conservation wardens to enter private property in carrying out their law enforcement responsibilities, but it is intended to apply to other (noncredentialed) DNR staff.]

Changes to the Trespass Law

The changes to the trespass law which have been the focus of Department staff's concerns became effective on July 11, 1996 with the enactment of 1995 Wisconsin Act 451. The pertinent provisions of the trespass law, as affected by the 1995 act, [relevant excerpts of the trespass law, as amended, are attached] include:

- A trespass violation occurs whenever anyone enters certain, specific types of land (enclosed, cultivated or undeveloped land or land occupied by a structure used for agricultural purposes) without the expressed or implied consent of the owner or occupant; it is also a violation if the owner or occupant of such lands gave consent to enter or remain on the lands for a specified purpose or subject to specified conditions and the person who received that consent enters or remains on the land for another purpose of contrary to the specified conditions.

- A trespass violation also occurs whenever anyone enters or remains on another's land after having been notified by the owner or occupant not to enter or remain on the premises; notification can occur if the person is notified personally, either orally or in writing or if the land is posted.

There are only 2 specific statutory exceptions contained within the trespass law which relate to DNR programs:

- a person entering the land of another, other than a residence or buildings or the curtilage of the residence or buildings, for the purpose of removing a wild animal as authorized under s. 29.59 (2), (3) or (4), Wis. Stats.; and

- a hunter entering land that is required to be open for hunting under s. 29.59 (4m) [wild animal removal] or 29.598(7m) [wildlife damage programs], Wis. Stats.

Citation Issued to County Zoning Administrator

Publicity about the changes to the trespass statute occurred when a county zoning administrator received a citation for trespass after going on private land to inspect the property to determine whether the county's junkyard ordinance was being violated. [The citation was subsequently dismissed.] Publicity about the applicability of the trespass law to public employees conducting inspections as part of their job responsibilities has focused attention of DNR staff on the possibility of receiving a citation for violating the trespass law.

Department's Statutory Authority for Inspections/Entry on Private Property

The Department staff have been specifically authorized by statute to conduct inspections and to enter private properties for purposes of conducting inspections for specific programs which the Department administers or oversees. A partial listing of those specific program-related statutory authorities include:
While the scope of the authority granted the Department under these specific statutory provisions varies (based on the specific language of each provision), generally the statutory provisions authorize a department employee to "enter any property" where a regulated entity is located to "inspect" or "investigate" "for the purpose of ascertaining compliance" with a specific program's requirements. Often the specific statute goes on to state that "no person may refuse entry or access to any authorized representative of the department who requests entry for purposes of inspection" or "obstruct, hamper or interfere with any such inspection" [e.g., s. 285.19, Wis. Stats. - air contaminant source inspections]. Some of the provisions contain language which restrict the Department's inspections to "reasonable times" or "reasonable hours."

In addition to these specific statutory authorities for Department staff to conduct inspections on private properties, the Department also has oversight authority over other programs which are administered by local units of government (e.g., floodplain and shoreland programs). The Department's oversight authority generally includes the authority to determine whether the local programs are being complied with and to initiate enforcement actions against violators of the local programs. Such oversight authority implies that the Department staff have authority to inspect private properties to determine whether compliance is occurring. However, as noted below, inspections of private property by Department staff in the course of exercising their program responsibilities should generally be conducted only after notifying the owner or occupant of the private property and obtaining consent to the inspection.

**Constitutional Constraints**

Although the statutes appear on their face to grant Department staff sufficient authority to enter private property for inspection purposes, both the United States Constitution (Fourth Amendment) and the Wisconsin Constitution (Article 1, Section 11) prohibit "unreasonable searches." Before a government employee can legally conduct an inspection under a statutory inspection authority, the government employee must have: (1) consent of the property owner or occupant; (2) a judicially-issued warrant (in these situations, a special inspection warrant); or (3) a case-law exemption -- for example, a pervasively regulated industry (e.g., firearms or liquor sales) or where there is an emergency that would jeopardize public health or safety or the environment if there is not an immediate inspection.

**Impact of "New" Trespass Law on DNR Inspections**

The relationship between the "new" trespass law and the Department's authority to conduct inspections under program-specific statutory authority is not entirely clear at this time. What is clear is that:

- the "new" trespass law substantially broadens the actions which constitute a trespass;
- the "new" trespass law has 3 very limited, specific exceptions to actions defined as trespass;
- there is no specific statutory exception in the trespass law for entry on private property by public employees for the purpose of performing their official duties or functions (A bill [ 1 997 Assembly Bill 2001 has been introduced to create such an exception.);
- the changes to the trespass law did not include any specific reference to or revise the specific statutory authorities under which the Department staff conduct inspections.
Until the relationship between the new trespass law and the Department's authority to enter private lands and conduct inspections is clarified (by statutory changes or litigation), the Department is not interested in "testing' the limits of the 'new" trespass law or of directly subjecting Department staff to situations which might result in the issuance of a trespass citation. (Certainly, if in the context of conducting an inspection under specific statutory authority, a Department staff person is cited for a trespass violation, the existence of specific statutory authority would be an affirmative defense to a trespass violation.) In the interim, Department staff should adhere to the following guidelines in conducting inspections.

**Guidelines for Conducting Department Inspections on Private Property**

Although Department staff may be legitimately concerned about the potential of receiving a citation for trespass for conducting inspections on private property, the changes in trespass law are not likely to substantially change the way most DNR staff conduct their inspections. The following guidelines should minimize potential problems:

Department staff who conduct inspections on private property pursuant to specific statutory authority should carry a copy of the statutory provisions with them in the event their authority to conduct inspections on private property is challenged by the owner or occupant of the property inspected.

In most instances, Department inspections can and should be conducted after notifying the property owner or occupant (and explicitly or implicitly securing his or her consent to the inspection).

If the inspection has not been scheduled in advance with the consent of the property owner or occupant, Department staff should attempt to identify the owner or occupant of the property to be inspected in advance of, or upon arrival at, the property and obtain the consent of property owner or occupant to conduct an inspection. (Showing the property owner or occupant a copy of the statutory authority for the Department to conduct the inspection will usually result in consent being given to enter and inspect the property.)

If consent to enter the property is refused, Department staff should seek a special inspection warrant under ss. 66.122 and 66.123, Wis. Stats., to inspect the property. Procedures for obtaining a special inspection warrant are outlined in Manual Code 4191.5.

If, during the course of conducting an inspection, the property owner or occupant notifies the Department staff that he or she is withdrawing consent to remain on the property, Department staff should leave the premises as requested. If further inspection of the property is required, Department staff should seek a special inspection warrant under ss. 66.122 and 66.123, Wis. Stats., for conducting the remainder of the inspection.

In the event that the property owner or occupant cannot be located or cannot be contacted to provide consent, Department staff should consult with their supervisors and program attorney to determine whether and under what conditions an inspection may be conducted.

In addition, if the Department issues permits, licenses or approvals which may entail the Department staff conducting an inspection of the property to determine whether the permit, license or approval should be issued or whether the conditions of approval are complied with, the application forms for the permits, approvals or licenses should be modified to include a specific 'consent' by the applicant to Department to conduct inspections of the property. In the interim, Department staff should follow the preceding guidelines for conducting site inspections on private properties which are subject to Department permits, licenses or approvals.

Following these guidelines should minimize any potential conflicts associated with the Department staff conducting authorized inspections, in light of the "new" trespass law. If there are additional questions about this
guidance or questions about the interrelationship of DNR inspection authority and the "new" trespass law in specific circumstances, DNR program staff should contact their supervisor and Bureau of Legal Services program attorneys for assistance.

Attachment
**EXCERPTS FROM THE 'NEW' TRESPASS LAW**

943.13 Trespass to land. (le) In this section:

*****

(az) "Implied consent" means conduct or words or both that imply that an owner or occupant of land has given consent to another person to enter the land.

*****

(e) "Private property" means real property that is not owned by the United States, this state or a local governmental unit.

(f) "Undeveloped land' means land that meets all of the following criteria:

1. The land is not occupied by a structure or improvement being used or occupied as a dwelling unit.
2. The land is not part of the curtilage, or is not lying in the immediate vicinity of a structure or improvement being used or occupied as a dwelling unit.
3. The land is not occupied by a public building.
4. The land is not occupied by a place of employment.

(1 m) Whoever does any of the following is subject to a Class B Forfeiture [The penalty for a Class B forfeiture is a forfeiture not to exceed $1,000]:

(a) Enters any enclosed, cultivated or undeveloped land of another, other than undeveloped land specified in par. (e) or (f), without the express or implied consent of the owner or occupant.

(am) Enters any land of another that is occupied by a structure used for agricultural purposes without the express or implied consent of the owner or occupant.

(b) Enters or remains on any land of another after having been notified by the owner or occupant not to enter or remain on the premises.

*****

(1 s) In determining whether a person has implied consent to enter the land of another a trier of fact shall consider all of the circumstances existing at the time the person entered the land, including all of the following:

(a) Whether the owner or occupant acquiesced to previous entries by the person or by other persons under similar circumstances.

(b) The customary use, if any, of the land by other persons.

(c) Whether the owner or occupant represented to the public that the land may be entered for particular purposes.

(d) The general arrangement or design of any improvements or structures on the land.

(2) A person has received notice from the owner or occupant within the meaning of sub. (1 m)(b), (e) or (f) if he or she has been notified personally, either orally or in writing or if the land is posted. Land is considered to be posted under this subsection under either of the following procedures:

*****

(3m) An owner or occupant may give express consent to enter or remain on the land for a specified purpose or subject to specified conditions and it is a violation of sub. (1 m)(a) or (am) for a person who received that consent to enter or remain on the land for another purpose or contrary to the specified conditions.

*****
(4m) This section does not apply to any of the following:

(a) A person entering the land, other than the residence or other buildings or the curtilage of the residence or other building, of another for the purpose of removing a wild animal as authorized under s. 29.59(2), (3) or (4).

(b) A hunter entering land that is required to be open for hunting under s. 29.59(4m) or 29.598(7m).

*****
A reminder to Water Management Specialists, NR 300.06(4) Wis. Adm. Code, requires the department to refund the permit fee if:

1) the applicant withdraws the application before the department determines the application is complete; or

2) if the department fails to make a determination within the time limits specified in s. NR 300.04 for activities regulated under ss. 30.10 to 30.205, 30.21 to 30.27 or 281.22 Stats. or

3) for supplemental permit fees (expedited permits) under NR 300.06(3), if the department fails to make a decision on a complete application within the time limit requested.

This applies to only complete applications received on or after September 1st, 2000. Complete applications for activities regulated under s. 30.206, 31.02 to 31.38 or for after-the-fact permits are not eligible for refunds. (See NR 300 for the specific language).

**Refund Procedure for Returning Fees Submitted with Chapter 30 Applications**

1. Make a copy of withdrawal (dismissal) letter that includes reason a refund should be given to applicant.

2. Copy the General Remittance Sheet (Form 9300-29A) that was originally submitted with the fee to be refunded.

3. Copy typed sheet that was originally submitted with General Remittance Sheet showing the docket #, applicant, address and amount of fee submitted. Example:

   John Doe $300.00
   1111 Pleasant Street
   Anywhere, USA 1111
   Check from: Address of consultant or person that submitted fee other than applicant.
   3-NE-00-0001

4. Highlight pertinent information on withdrawal letter and typed sheet to show information needed for refund.

5. Submit the above THREE sheets to your Regional Finance person who will enter the codes and information into Wismart.

6. A refund check is sent directly from Madison to the applicant/consultant that originally submitted the fee. The refund may take 3-4 weeks to process.
DATE: December 21, 2001

TO: Water Management Specialists
Water Management Engineers
Regional Aquatic Habitat Experts
Bureau of Fisheries Management and Habitat Protection – Rivers and Habitat Protection Section

FROM: Mary Ellen Vollbrecht, Chief
Rivers and Habitat Protection Section

SUBJECT: Guidance on Reviewing Chapter 30 Permit Applications for Completeness

In the 2001-2003 budget bill, Chapter 30 was amended to require specific time limits for the Department to determine if a permit application is complete, and for scheduling public hearings for some chapter 30 activities. This guidance explains the new statutory requirements, and outlines the steps for staff to follow to be consistent with the new statutory language requiring review for completeness.

Section 30.015, Wis. Stats., requires the following:

- The Department must provide a notice of the permit application completeness or incompleteness to the applicant within 60 calendar days from receipt of their application, for applications filed pursuant to sections 30.10 to 30.27, Stats.;
- The notice of incompleteness must specify the informational items necessary to complete the application;
- Department staff may not request additional informational items which were not originally identified in the notice, unless staff and the applicant agree or the applicant makes material additions or alterations to the project;
- If a notice of incompleteness is not provided to the applicant within 60 days, the applicant may refuse to provide additional information and Department staff will have to make the permit decision based upon the information originally submitted.

To meet these statutory requirements, Water Management Specialists should complete the following steps with each new chapter 30 permit application:

**Step 1. Record Date of Receipt**
All permit applications should be marked or stamped with the date of receipt.

**Step 2. Review for Completeness**
Water Management Specialists should review the permit application for completeness as soon as possible, or within 55 days of receipt. If the permit application is complete, a notice that the permit application is complete should be sent to the applicant (proceed to Step 3).
If the permit application is incomplete, staff should develop a list of informational items necessary for the Department to complete their permit review. The informational items should be essential to determine if the project will meet the legal standards in statute and administrative code. It may be necessary to discuss the application with your field biologists or engineer to determine information needs. A number of Information Checklists have been developed to assist staff in identifying the information that will be required to complete the application.

Section 30.015, Stats., prohibits staff from requiring items of information that are not specified in the initial Notice of Incomplete Application letter. This letter is the only opportunity Department staff have to request additional information, so be thorough. You may initially ask for a list of required items, and later waive some of those items if you conclude that you can reach a permit decision without all the information that was initially requested in the notice.

Step 3. Provide Notice to Applicant

Within 60 days from receipt of the permit application, Water Management Specialists are required to provide notice to the applicant that the permit is complete or incomplete. Staff should send one of the following letters:

A. Notice of Complete Application: If the permit application is complete, a letter providing notice that the permit application is complete should be sent to the applicant. A new letter template titled Notice of Complete Application has been added to the FH Permits Database documents.

B. Notice of Incomplete Application: If the permit application is incomplete, a letter providing notice that the permit application is incomplete should be sent to the applicant. A new letter template titled Notice of Incomplete Application has been added to the FH Permits Database documents. This template document includes the following checklists:

- General Permit Information
- Work Plan Sequence Information
- Erosion Control Plan Information
- Material Management Plan Information
- Dewatering Plan Information
- Wetland Information

The checklists can currently be used in two ways. First, you can check the box next to each applicable item of information that is necessary, print the checklist page(s) and attach them to the Notice of Incomplete Application letter. Second, you can cut-and-paste specific items from the checklists and insert them into the Notice of Incomplete Application letter. A third method is under development, which will provide a set of “tabs” in the FH Permits Database from which to choose the missing items, and have the database system automatically insert them into the Notice of Incomplete Application letter. Checklists for Nonmetallic Mining and for Engineering Hydrology and Hydraulics requirements are also under development, and will be added to the FH Permits Database documents when they are completed.
Again, this Notice of Completeness/Incompleteness requirement applies to permit applications filed pursuant to section 30.10-30.27, Stats. Applications filed pursuant to sections 31.02 to 31.38 (dams, water levels, etc.), 281.22 (federal wetland water quality certification), 281.36 (wetland mitigation) and 281.37 (nonfederal wetland water quality certification), Stats. should be reviewed following the timelines in NR 300, Admin. Code. See the attached table for applicable timelines for each project type.

For enforcement situations, NR 300 indicates that time limits are not applicable when the department has determined, due to an impending enforcement action, that it will not process after-the-fact (ATF) permit or approval applications. NR 301.04(1) provides that the department may either suspend or continue processing ATF applications. If you determine to not process an ATF application until enforcement action is complete, document this determination for the file, and the time limits for Notice of Completeness/Incompleteness will be suspended. If you determine to continue processing an ATF application, then the 60-day time limits apply.

Permit fees should continue to be handled pursuant to section 30.28, Stats. and NR 300, Admin. Code.

Attachment: “Time Limits for Permits, Approvals and Determinations” table

Approved: Aquatic Habitat Coordinators, at October 22, 2001 FH Board Meeting

Approved: Michael Cain, Legal Services on 12-21-01

Approved: Mary Ellen Vollbrecht, Section Chief on 12-21-01
### TIME LIMITS FOR PERMITS, APPROVALS AND DETERMINATIONS

<table>
<thead>
<tr>
<th>Action</th>
<th>Applications filed pursuant to ss. 30.10 to 30.27</th>
<th>Applications filed pursuant to ss. 31.02 to 31.38</th>
<th>Applications filed pursuant to s. 281.22 (federal wetlands)</th>
<th>Applications filed pursuant to s. 281.36 (wetland mitigation)</th>
<th>Applications filed pursuant to s. 281.37 (nonfederal wetlands)</th>
<th>Expedited Permits (20 business days to accept request for expedited)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review and send completeness notice or send one time comprehensive information request</td>
<td>60 calendar days</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>30 calendar days</td>
<td>60 calendar days for permits issued under ss. 30.10 to 30.27</td>
</tr>
<tr>
<td>Review for completeness and inform applicant (no limit on requesting additional information)</td>
<td>N/A</td>
<td>30 calendar days</td>
<td>30 calendar days</td>
<td>30 calendar days</td>
<td>N/A</td>
<td>30 calendar days for permits issued under s. 281.37</td>
</tr>
<tr>
<td>Make a final determination once application is complete</td>
<td>120 calendar days</td>
<td>120 calendar days</td>
<td>120 calendar days</td>
<td>120 calendar days</td>
<td>120 calendar days</td>
<td>Negotiated with applicant but shorter than 120 calendar days</td>
</tr>
<tr>
<td>Artificial wetland determination under NR 103</td>
<td>N/A</td>
<td>N/A</td>
<td>15 working days</td>
<td>N/A</td>
<td>15 working days</td>
<td>N/A</td>
</tr>
</tbody>
</table>

If the Department determines that an EA is required, the time limits for making a final decision on a complete application shall be increased by 60 working days.

The time limits for making final determinations on completed applications do not include the number of days between November 1 of any calendar year and April 1 of the succeeding calendar year for applications received after October 1 if a field investigation is required before the department has adequate information to make a decision.

*Note: This table was prepared as an attachment to the December 21, 2001 memo “Guidance on Reviewing Chapter 30 Permit Applications for Completeness”.*
DATE: November 30, 2001

TO: Water Management Team

FROM: Susan Sylvester - AD/2

SUBJECT: Permits and Approvals for New Power Plants

Background

The purpose of this memo is to provide information and establish responsibilities for WPDES permits, chapter 30 permits, other approvals and associated actions for new power plants proposed in the state.¹ A memo from the Secretary (latest draft attached) describes the process at the Department level and directs the preparation of this guidance.

Section 196.491, Stats., establishes the process for the review and approval of permits for power plant projects. These statutory provisions override other provisions in state law governing the WPDES and other permit programs. However, the current practice involves many water program staff in the Regions and the Central Office, creating confusion on the part of the project developer, and significant redundancy in our reviews and comments on projects. Establishing a clear process is necessary to assure the Water Program is responsive to project developers who apply for a permit to construct a power plant in Wisconsin. This process is being created to conform to the directions provided by the Secretary that establishes the Department process for the review of power plants.

Under the current statutory operating procedures, the project developer (or their consultant) submits an engineering plan to the Department for a determination of the permits and approvals that would be required for the construction or operation of the facility. The Department has 30 days to respond to this submittal. Following that response, the developer submits permit applications that require Department action within specified time periods.

Process

We will implement the following process to assure we carefully, promptly and thoroughly make decisions on these projects in conformance with the statutory requirements that apply:

1. Engineering plan review – As directed in the Department’s review process, the Section Chiefs of the Rivers and Habitat Section, the Private Systems Section and the Wastewater Permits and Pretreatment Section will be responsible for reviewing and providing response to the engineering plan submitted by the project developer. As necessary, these Section Chiefs (or their designee) will consult with appropriate Regional water program staff regarding the identification of permits and approvals that will be needed for the project. The response to the engineering plan submittal will be sent to the Chief of the Environmental Analysis and Liaison Section from the individual Section Chiefs completing the

¹ A separate draft guidance document has been issued (dated October 3, 2001) for water withdrawals and water loss review and approvals under s. 281.35, Stats., and NR 142.
2. Water Program Project Coordination – Because many of the permits and approvals for power plant projects will be issued by the Regions, it is important that there be a cross-program regional lead person to assure an effective and coordinated Regional review of projects. Therefore, the Region in which a particular project is to be located should assign an overall “water project manager” for each of these projects. This person should be in the lead as the primary contact for the facility regarding water-related permits and approvals. This could be the GMU leader, a sub-team leader or a staff person with the GMU or whomever the Region assigns to function in this role. This project manager would then be responsible to assure there is coordination of all regional water program staff who are responsible for regulatory permits and/or approvals (e.g., WPDES, stormwater, WQBELs, chapter 30, s. 281.35 water loss, etc.). Coordination means ensuring data sharing among water permit reviewers, consolidating data requests, efficient division of labor on data analysis and field work, and resolution of any differences in data interpretation or policy conflicts. This water project manager will also coordinate the water program’s involvement in the WEPA process through consultation with the Regional project coordinator (see Secretary’s memo). A copy of the request for review of the engineering plan memo that is prepared by the Chief of the EAL Section and a copy of the engineering plan will be sent to the Water Media Leader in the Region where the proposed facility is to be constructed. This memo will initiate the formal action to assign a “water project manager” in the Region. The Water Media leader in the Region will inform the Section Chiefs identified in item 1, above, of the person assigned as the water project manager.

3. WPDES Process Water Permits – Based on the review of the engineering plan, the Section Chief of the Wastewater Permits and Pretreatment Section and the Region’s project manager will jointly agree on whether the initial WPDES permits for wastewater discharges will be issued in the Central Office or in the Region. In addition, at this time, assignments for issuance of permit coverage for stormwater, construction sites, or other general permits will be made. If the noted Section Chief and Regional project manager cannot reach agreement on the assignment of permit issuance responsibility for the wastewater discharges, the dispute will be resolved through the chain of command, with the Division Administrator as the final decision-maker. This decision will be based on factors that include: size and complexity of the project, current workload of permits staff in the central office and the regions, experience of respective staff in the regions, relationship between the WPDES permit and the other permits that may be issued by the Region, etc. The permit drafter, whether in the central office or in the region, will work with the regional project manager to issue the permit and associated approvals within the time frames established in s. 196.491, Stats. Permit sign-off will follow protocols for all other WPDES permits issued in the central office or in the Regions.

4. Other WPDES permits – The construction site and industrial stormwater general permits and any other non-process WPDES permits will be issued by the Region.

5. High Capacity Well and other DG Approvals – If the proposal involves the construction of a high capacity well, the review and approval of that well will occur in the Bureau of Drinking Water and Groundwater. If other water supply approvals are needed, they will also be reviewed and approved by the Bureau in consultation, as necessary, with the Region. If a water loss approval under s. 281.35,

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2 This response may contain reference to generic guidance or other documents that relate to specific program elements.
3 Simple cycle power plants needing only limited quantities of water or plants using municipal water supply and treatment will normally not warrant this level of management.
Stats., is needed, these approvals will be coordinated with the Region (see item 7).

6. Waterway and wetland permits and approvals (i.e., ch. 30, etc.) will be issued by Regional staff. If the application necessitates practicable alternative analysis, significant adverse impact to wetland function, or diversions (water rights determinations), consult bureau staff before determining application completeness. Bureau staff is also available for assistance with complex jurisdictional determinations, instream flow analyses, other advanced analysis methods, and policy issues that are not addressed in the handbook.

7. Water Withdrawal and Water Loss Review and Approval – This review and approval will occur within the GMU team at the Region, under the direction of the Regional water project manager. If the water withdrawal/loss involves a high capacity well approval, the Region will undertake this review in consultation with the Bureau of Drinking Water and Groundwater. Separate guidance is available regarding this process.

**Discussion**

A significant number of decisions associated with project direction for an individual proposal are made during project review at the conceptual stage or during the review of the engineering plan. Much of the subsequent activity associated with the development of permits will be dependent on information supplied at that time. Because of the timelines established in statutes, it is important that communication with the developer be often and direct – including statement of likely outcomes, to assure the efficient use of time in drafting the permits and approvals once the applications are received.

It should be noted that the addition of these projects into the permitting process may increase the backlog of other permits and conflict with other statutory deadlines, including some WPDES permits and waterway and wetland permits. For WPDES permits, the statutory deadlines associated with power plant projects are more restrictive than those associated with the reissuance of existing permits, and so a higher priority will be assigned to these power plant projects. Where competing statutory deadlines for waterway or wetland decisions cause conflicts, consider the consequence of the specific deadline. Generally, power plant application review for completeness will take priority, followed by review for completeness for other applications – the consequence of missing completeness determination deadlines is that information needed for decisions cannot be obtained. In terms of decisions, power plants are top priority because of the consequences on other agency decisions, followed by expedited decisions because of the revenue impact of missing a deadline.

cc: Duane Schuettpelz – WT/2
   Lee Boushon – DG/2
   Mark Putra – DG/2
   Mary Ellen Vollbrecht – FH/2
   Energy Workgroup
DATE: November 21, 2001

TO: Department Leadership Team

FROM: Darrell Bazzell – AD/5

SUBJECT: Department Review of Power Plants

The purpose of this memo is to advise you of the overall process we will be using to review proposed electric power generation facilities. I place a very high priority on positioning the Department to be an effective partner in providing for Wisconsin’s future energy needs in an environmentally sensitive and cost effective manner. This is consistent with the role assigned to us by the Legislature and envisioned in the Governor’s Energy Strategy.

The approach described below was developed by the recently established Energy Work Group. I charged that group, in part, with the task of developing recommendations for how we position ourselves to fulfill the Department’s important review responsibilities for power plant projects. The group will also be looking at how we should deal with other types of energy-related projects and a variety of broader energy-related policy matters.

There are parallel needs for a better definition of roles and responsibilities within the permit review programs, particularly between the central office and the regions. By copy of this memo I’m asking the bureaus in the Water, the Air & Waste and the Land Divisions that are involved in power plant reviews to assess their processes for responding to the tight statutory timelines applicable to these reviews and to develop any program-specific guidance that’s needed to assure we deal with power plant work in a timely fashion.

Statutory Timelines and Agency Responsibilities

As depicted in Attachment #1, the Power Plant Siting Law (s. 196.491 (3), Wis. Stats.) establishes a tight schedule for reviewing large (100 Megawatts or more) electric generation facilities by both the Public Service Commission (PSC) and the Department. The formal process begins with the Department’s review of an Engineering Plan to identify the Department regulatory requirements for the facility. This Plan must be submitted at least 60 days before the filing of an application with the PSC. Our review of the Engineering Plan must be completed within 30 days of the date of receipt by the Department. The project proponent then has 20 days to submit applications for the permits and approvals we’ve identified in our review of the Engineering Plan. The Department then has 30 days to determine whether the applications are complete. In making the application completeness determinations, the Department also considers whether it has enough information to do an adequate WEPA review and shares those conclusions with the PSC. Once the Department finds the applications to be complete, we have 120 days to make our regulatory decisions.

The project proponent must also file an application for a Certificate of Public Convenience and Necessity (CPCN) with the PSC. Significantly, the PSC has only 180 days from finding that an application is complete to make a final determination on whether to approve the project.

Within this time frame, the PSC (generally with the Department as a cooperating agency) must complete the WEPA process (typically a Draft and a Final EIS), hold a public hearing on the CPCN application, and act on the application at a regular meeting of the Commissioners.
Under the Siting Law, the PSC cannot finalize its decision on the CPCN application until DNR permits needed to construct the facility are issued. Other statutes provide that the construction permit for a new air pollution source is needed before construction (including site preparation) can begin. In addition, other permits for alterations of navigable waters, high capacity wells, wastewater discharge, solid waste disposal, etc. must have been issued before construction or operation of those specific facilities may commence.

The present statutory situation puts considerable pressure on the Department to accelerate our review of proposed power generation facilities. For example, if lack of data to support our evaluations of air, water, solid waste or habitat-related impacts, including endangered resource issues, were to prevent the Department from being able to complete its WEPA or regulatory responsibilities, we could be cast as the primary cause of delay in PSC’s efforts to meet its schedule requirements under the Siting Law. Therefore, it’s important that the Department demonstrate a commitment and capability to fulfill its responsibilities under the Siting Law and to help the PSC meet its statutory review deadlines.

Organizing to Meet Power Plant Siting Law Requirements

At the DLT level, the Administrator of the Air & Waste Division is assigned responsibility for overseeing implementation of the procedures outlined in this memo. A conceptual framework for these procedures is presented in Attachment #2. The related responsibilities include: 1) resolving issues regarding the priority of a particular power plant project relative to the other work assignments of project team members; 2) resolving legal, technical and policy questions arising out of the Department’s review of proposed power plants; 3) developing an intra-net based system for tracking the status of each project vis-à-vis applicable Siting Law deadlines; 4) developing a system of performance measures for monitoring the implementation of the procedures in this memo; and 4) communicating with counterpart administrators at the PSC to assure the provisions of the PSC/DNR Cooperative Agreement on WEPA procedures (Attachment #3) are followed.

The Environmental Analysis and Liaison (EAL) Section in the Bureau of Integrated Science Services is responsible for coordinating the review of Engineering Plans for proposed power plants. Engineering plans received by agency staff should be forwarded immediately to the EAL Section Chief given the 30 day review deadline in the Siting law. The EAL Section Chief will work with the Regional Environmental Analysis Supervisor and the programmatic contacts listed in Attachment #2 who appear to be affected by the particular project. Department employees receiving an initial contact from a prospective power plant applicant should advise the developer to contact the EAL Section Chief regarding the process, information and review issues likely to affect the project. EAL Section staff will ensure that the potential applicant is aware of all available guidance relating to the Department’s overall information requirements including relevant pages on the Department’s Web Site.

If possible, EAL staff will arrange an early (pre-Engineering Plan filing) meeting between the prospective applicant, the assigned contacts from the involved Department programs, and the PSC to discuss the project. Once an Engineering Plan is received, EAL staff will coordinate the Department review within the 30-day statutory deadline. This review, which is at a general and typically conceptual level, will be the responsibility of the programmatic contacts. Input from appropriate regional staff will also be solicited. The assigned EAL staff member will send an email copy of the Engineering Plan review memo to the Administrators of the Divisions that are likely to be involved in the review of the project.

Upon becoming aware of a proposed power plant project for which the applicant has or is likely to submit an Engineering Plan, the EAL Section Chief will consult with the appropriate Division Administrators and Regional Director (or designee) to designate a project manager for the purposes of Manual Code 1506.1. These appointments may go to either central office or regional staff on a case-by-case basis. For those projects already in the process, the Project Manager will be designated within 30 days of the date of this memo. A listing of these projects is presented in Attachment #4.
After their appointment, which will be documented in the Department’s review letter on the Engineering Plan (or sooner in the process, if practicable), Project Managers will work with the EAL Section Chief, Regional Director (or designee) and the program contact persons to determine the composition of the project review team. This team of central office and regional staff will be responsible for contributing to the WEPA document and process and issuing all needed permits. The composition of the project review team will be confirmed as soon as practicable in a memo signed by the Administrators of the participating Divisions.

The responsibilities of the Project Manager include: 1) facilitating contacts with the applicant and consultants, the Public Service Commission and other agencies likely to be involved; 2) serving as the first point of contact for the public and the press with interest in the project; 3) coordinating the internal review of the permit applications and the Department’s role in the WEPA process per the PSC/DNR Cooperative Agreement; 4) assuring the DNR’s intranet-based tracking system contains current information about the status of each project vis-à-vis applicable Siting Law deadlines; and 5) monitoring progress on the project and consulting with the Administrators of the Water, Air & Waste and Land Divisions as necessary to ensure an appropriate effort is made to meet Siting Law deadlines. If the Department will be adopting the PSC’s WEPA document for the project, the Project Manager will ensure appropriate participation as required by NR 150.20, Wis. Adm. Code.

The affected Region will designate a Regional Coordinator for the project. This would typically be staff from the Environmental Analysis program or another person in a logical position to facilitate interdisciplinary review of the project. When warranted by workload and other related considerations, the Project Manager and Regional Coordinator may be the same person. If necessary, the participating Water Division programs will designate a lead representative from the region to coordinate their review responsibilities.

The Regional Coordinator will be responsible for ensuring there is appropriate, timely and accurate regional input regarding the project. The Regional Coordinator should keep the Project Manager, Water Program Lead (if appointed), Regional Management and management of affected programs apprised of any issues or concerns that arise at the region, and work to address them. Such issues could relate to the review of permits that are being processed in the region or the region’s input into the WEPA process. The name of the Regional Coordinator will be documented in the Department’s review letter on the Engineering Plan (or sooner in the process if practicable).

The Project Manager will meet with the Regional Coordinator, Water Program Lead (if appointed) and PSC staff as soon as practicable to discuss respective responsibilities, review schedules, information needs and other items of mutual interest. The Project Manager will consult with the Bureau of Legal Services early in the project review process in order to establish mutual agreement on the timing and extent of that program’s involvement. This should include preliminary discussions as to which Department staff may be called upon to provide testimony at Department, PSC, and/or joint hearings on the project (including WEPA documents and any of the permits).

The Project Manager will strive to establish and maintain effective communication between the Department, the PSC, and all affected outside parties. This will include ensuring that staff assignments, information needs, timing and other factors are clearly understood by all participants. The Project Manager will keep the EAL Section Chief and the Air & Waste Administrator informed of critical developments affecting the timing and scope of the Department’s review. The Air & Waste Administrator will work with other affected Administrators and the Regional Director as appropriate to address any issues or concerns needing their attention. To facilitate the necessary communication efforts, the EAL Section Chief will pursue ways to enhance our ability to monitor the status of multiple power plant reviews and identify and address critical path issues relating to permit reviews or compliance with WEPA.

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4 Simple cycle power plants needing only limited quantities of water or plants using municipal water supply and treatment will normally not warrant this level of management.
Next Steps

The Energy Work Group is also developing a strategy and action plan for implementing non-statutory solutions to the timing challenges inherent in the Siting Law. The objective is to direct an outreach effort towards potential power plant applicants to inform them of the overall regulatory framework and information requirements likely to be applicable to their project. Attachment #5 to this memo is the current draft of what’s being called the “Proactive Strategy” for facilitating the issuance of all DNR permits within the Siting Law deadlines. I’m very pleased with this strategy and see its development and implementation as an excellent opportunity for the PSC, utilities and other power plant developers, environmental organizations and the public to work together in providing for Wisconsin’s energy needs.

I appreciate the commitment of all Department regulatory programs to periodically review their permit processes relating to power plants in order to identify and remove any barriers to completion of their permit reviews within the Siting Law deadlines. If you have any questions about this memo or its implications for a project that you are involved in, please contact Jay Hochmuth at 608-267-9521 or George Albright at 608-266-6437.

CC: Avie Bie – PSC Chairperson
    Robert Norcross – Administrator, PSC Electric Division
    Lloyd Eagan – AM/7
    Mike Staggs – FH           Jim Kurtz – LC/5
    Energy Work Group           Regional EA Supervisors
ATTACHMENT 1

SCHEDULE OF STATUTORY EVENTS FOR REVIEWING POWER PLANTS
UNDER S. 196.491, WIS. STATS.\(^5\)

Day 0 – Engineering Plan received by DNR

Day 30 – DNR response to Engineering Plan regarding permits and approvals required

Day 50 – Project proponent submits applications for DNR permits

Day 60 – Project proponent submits CPCN application to PSC

Day 80 – DNR makes determination of application(s) completeness

Day 90 – PSC makes determination of CPCN application completeness

[DNR and PSC review permit applications, prepare WEPA document, hold public hearings]

Day 200 – DNR makes decisions on permits needed for construction of the facility

Day 270 – PSC makes decision on CPCN

Day 271 – Project proponent may commence construction

\(^5\) Assumes all applications are complete upon submittal
.Attachment 2

Conceptual Framework for Reviewing New Power Plants

Project Applicant

Engineering Plan Submittal

Integrated Science Services
(EAL Sect. Chief & Reg. EA Sup’visor)

Fisheries and Habitat
(Chief, Rivers & Habitat Section)

Waste Management
(Chief, Technical Support Sect.)

Air Management
(Chief, Printing&Coating Sec.)

Endangered Resources
(Chief, NHI Section)

Drinking & Ground Water
(Chief, Private Systems Section)

Watershed Mgmt.
(Chief, WW Permit & Prtrtmt Section)

Response to Engineering Plan

Identification of DNR Permits Needed and Appointment of Project Manager

Creation of Project Review Team
ATTACHMENT 3

Cooperative Agreement Between the
Public Service Commission and the Department of Natural Resources
For WEPA Document Preparation and Review

I. Purpose and Scope

The Public Service Commission (PSC) and the Department of Natural Resources (DNR) are both involved in making regulatory decisions regarding several categories of energy-related projects. The majority of these projects are electric generation facilities. The PSC and the DNR are also responsible for complying with the Wisconsin Environmental Policy Act (WEPA) in the course of making their respective regulatory decisions. The intent of this agreement is to maximize the efficiency and effectiveness of the agencies’ environmental review processes while recognizing the different authorities, expertise, and needs of each agency. This agreement also embodies a mutual commitment to meet the statutory timelines for electric generation projects established in 1998 Wisconsin Act 204.

This agreement applies to projects where both agencies have critical regulatory authority as recognized by Wis. Stat. § 196.491, or where sensitive resources could be significantly affected by the proposed project including any ancillary facilities. Critical approvals are those that are necessary for the applicant to begin construction of the facility or to put it in operation. Examples of such approvals include a certificate of public convenience and necessity (CPCN), an air pollution source permit, and a process wastewater discharge permit.

This agreement supersedes the April 1978 Cooperative Agreement and remains in effect until amended or rescinded by the mutual concurrence of the Chairperson of the PSC and the Secretary of the DNR. The PSC WEPA Coordinator and the DNR Chief of the Environmental Analysis and Liaison Section will be responsible for overseeing their respective agency’s implementation of this agreement.

II. Decisions regarding the WEPA process

Each agency will make its own decision about what level of environmental review is appropriate for compliance with WEPA. These determinations will be based on considerations such as: 1) existing administrative rules; 2) the extent of the agencies’ authority over the project; 3) the type of technology proposed (including ancillary facilities); and 4) site characteristics for the proposed project and the ancillary facilities.

In some cases, these WEPA process decisions may result in each agency conducting a different process or level of review. Both agencies may decide to prepare an Environmental Impact Statement (EIS), both may prepare an Environmental Assessment (EA), one may prepare an EA and the other an EIS, or one agency may decide not to prepare any WEPA document at all. A brief discussion of each option is outlined below.

1) When both agencies determine that preparation of a joint EIS is warranted for a major electric generation project, the PSC shall assume the role of lead agency since it has the broadest decision responsibility. For review purposes, a power plant project includes the generation facility as well as sites and routes for ancillary facilities, such as transmission interconnections, fuel supply lines, wells, and water intake and discharge pipes.

DNR shall consider whether to jointly prepare the EIS, or to adopt the PSC document. Appropriate participation and technical assistance by DNR staff shall be determined by consultation between the agencies.

2) If both agencies determine that an EA is needed, they may jointly prepare it with responsibilities for content similar to those for an EIS.
3) If only one agency prepares an EIS or EA, the other agency shall provide information related to aspects of the project that are under its authority. This information sharing may include review and comment on the EIS or EA and participation in the hearing process of the preparing agency.

III. Procedures for joint preparation of an EIS or EA

When a joint WEPA document is prepared, the DNR and PSC will coordinate their environmental and regulatory review of the subject projects to the extent allowed by their separate authorities, and within the constraints of the normal timing of the submittal and review of necessary permits and approvals.

Upon initial contact by a potential applicant or filing of an Engineering Plan with DNR, the DNR project manager and the PSC WEPA coordinator will exchange information and commence a discussion of their respective WEPA document decisions.

Each agency shall designate an employee who has the following responsibilities for each specific project:

1) coordinate that agency’s participation in the review of the project.
2) expedite the exchange of information between the two agencies.
3) resolve any scheduling and coordination problems.
4) apprise the other agency of all project developments, through timely exchange of all appropriate correspondence and other new information, and through notification of all scheduled meetings which involve the applicant.
5) serve as a contact through whom all interagency communications can be directed and establish guidelines for direct staff contact where appropriate.

As the lead agency, the PSC determines the process, and is responsible, with input from the DNR, for developing the scope of the EIS or EA, directing document preparation activities, and public review of the EIS or EA.

The agencies shall jointly provide the applicant with an outline of the information to be included in a project application. The PSC shall not consider the application complete until it has been reviewed and determined to be sufficient by both agencies for development of the EIS or EA. Issues raised in scoping may supplement the agencies’ initial content outline.

The scoping process to identify issues to be considered in the EIS or EA may include public meetings (held by the applicant, the agencies, or local municipalities) or solicitation of comments from the affected or interested public.

The preparation of the EIS or EA shall proceed according to applicable agency rules. Throughout the preparation of the document, each agency shall have final editorial authority over its portions of the documents, subject to lead agency non-substantive editorial and publication responsibilities.

Public notice of the availability of the EIS or EA shall be circulated as required by the applicable rules of the agencies. PSC will be the recipient of written comments, and will provide all comments to DNR in a timely manner. Responsibility for responding to public comments or addressing additional issues will be based on agency expertise and authority, as outlined in the next section of this Agreement.

PSC will conduct the public hearing on an EIS, generally as part of the CPCN hearing. During public hearings on the EIS, each agency shall make its staff available to answer questions from the public and interveners on those portions of the EIS for which it is responsible. DNR witnesses may testify on their role in preparing the
EIS, or present the positions of the agency. If feasible, any DNR permit hearings will be coordinated with the EIS/CPCN hearing.

Following completion of the hearings and response to public comments, each agency shall independently determine its compliance with WEPA. The final regulatory decisions of both agencies will be made independently upon completion of the hearing and review process.

IV. Responsibilities of each agency in preparing a joint EIS or EA

Each agency shall be responsible for verifying relevant materials supplied by the applicant, based on its expertise and legal responsibilities. If outside analysis of an application is needed, the agencies shall agree on the source of that expertise.

The PSC has principal responsibility for developing content related to the power system, social and economic issues, land use planning, transportation, human health and welfare (including electric and magnetic fields), the natural environment in general, and other elements that may be considered in its decisions or are subject to its authority. DNR is responsible for preparing, or ensuring the accuracy of, the portions of the document that describe activities it regulates (emissions, water source and discharge, stream crossings, effects on municipal wells, and solid waste disposal). DNR also will provide information and expertise as needed for the evaluation of impacts on terrestrial and aquatic life.

V. Resolution of Conflicts

Both agencies will attempt to resolve, informally and cooperatively, any disagreements or conflicts over procedures or information as described in this Agreement. If the responsible staff members are unable to resolve the issues, senior managers for each agency will attempt to resolve the disagreement. Should this fail, the agencies may consider issuance of separate environmental review documents.

Ave Bie, Chairperson
Public Service Commission

Date

Darrell Bazzell, Secretary
Department of Natural Resources

Date
## ATTACHMENT 4: ELECTRIC GENERATION PROJECTS & ASSIGNMENTS as of 11/13/01

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<th>Project</th>
<th>Status</th>
<th>Location/Region</th>
<th>Project Manager</th>
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<td><strong>BASELOAD/INTERMEDIATE PROJECTS</strong></td>
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</tr>
<tr>
<td>Fox Energy</td>
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<td>Outagamie County/NER</td>
<td>To Be Determined (TBD)</td>
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<td>Mirant Plover</td>
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<td>Calpine/Skygen Arpin</td>
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<td><strong>PEAKING PLANTS</strong></td>
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</table>
Attachment 5

DRAFT
Concept Paper
“Proactive Strategy” Related to Power Plant Construction

Background

From the mid-1970's through 1997, the Advance Planning process was used to ensure electrical reliability in the state and to ensure a coordinated effort among the Public Service Commission (PSC), the Department (DNR), and the energy industry. The Advance Plan was designed to facilitate the consideration of major issues, such as the cost, reliability, efficiency, health, safety, and environmental effects of various alternatives for meeting the future electric energy needs of the state. The Advanced Plan set the framework for determining what facilities should and could be built in Wisconsin. With the addition of the coordinated site review process for specific facilities, PSC and DNR were engaged in a step by step process, with each responsible for certain actions before the permit process could proceed to the next step.

In 1998, the Legislature changed the siting and approval process for energy infrastructure. With passage of Act 204 (s. 196.491, Stats.), the Advance Planning process was discontinued, the ownership and construction of transmission components of the system were transferred to a separate company, and independent power producers were allowed to construct power plants in the state. Act 204 also truncated the step process that PSC and DNR had used to coordinate their actions regarding power plant review and permitting, with each now working off separate timelines prescribed in the statutes. These changes occurred against a backdrop of rapid change in the energy industry nationwide, characterized by deregulation, and a shift from retail to wholesale generation. Wisconsin has experienced these changes as well. As a net energy importer, Wisconsin is attracting non-utility energy producers (merchant power companies), who are interested in constructing power plants in our state. Many of these companies, and some of their consultants, are from out-of-state, and thus are unfamiliar with Wisconsin’s regulatory framework. Energy technology is undergoing rapid change as well, resulting in new and complex issues that strain the existing regulatory and policy framework.

The challenge faced by the DNR is to maintain a robust and efficient permitting process that protects and enhances Wisconsin’s environment and ecosystems while meeting the electrical energy needs of the state. This can be done by engaging the PSC and the electrical power industry in a process that moves the information-gathering needed to support the application and approval process “upstream,” so that it can be accomplished at least in part before the clock starts ticking on the prescribed regulatory process. This proactive strategy could also result in a relationship among major players that promotes alignment of energy and ecosystem goals. All parties—PSC, DNR, and project applicants—are currently strained to complete their obligations in a satisfactory manner, thereby creating an opening for this new process.

Requirements of a Proactive Strategy

Although each of the major players will have particular needs that must be met by the strategy, it should be assumed that all parties will have in common a desire for sustainability—both of the environment and of energy production. This common desire should be acknowledged and put in place as the foundation for the rest of the strategy. In addition, a successful strategy should:

- Complement the “downstream” process
- Assure full compliance with all applicable laws and regulations
- Result in a net gain for key participants. Each of the major players must gain by becoming engaged in the process and staying engaged over time
- Address the bottlenecks and limiting factors in the regulatory phase of power plant siting (i.e., the post engineering plan phase)
- Be based on a business model rather than a regulatory model
- Be consultative and voluntary in nature, building on the strength of relationships
- Be realistic and “doable”, for both implementing and maintaining the process over time
- Be written in plain language, opening up the process to citizens and others who are interested and concerned about power plant construction and Wisconsin’s energy future
- Include industry consultants as well as industry representatives
- Take advantage of agency experience with successful “upstream” strategies
- Take advantage of web technology
- Be focused and directed toward a vision for Wisconsin’s environment
- Empower all parties to achieve this vision through sharing of data, information, and expertise

A Proposal

The following proposal for an upstream strategy focuses primarily on power plant projects. It has four key parts:

1. Articulate the downstream process so that all parties will know what lies ahead. This could be done in various ways: (a) developing a road map for the permit process, that details, on a technology-specific basis, required permits and the process for obtaining them; (b) providing a list of companies that have been permitted and what their permits looked like; (c) providing a “model” permit application for each of the 3 types of power generation—simple cycle, combined cycle, and cogeneration. This information could be delivered through a web interface, by personal contact, or both. The important thing will be for the information to be available from a single source, and be written from the applicant’s perspective. The source could be DNR’s home page or the Wisconsin Government home portal. Formal agreements with other agencies (DOA, PSC, Commerce) involved in permit review and approval could be used to define a coordinated process for each agency’s work.

2. Develop a Model Process that lays out what all companies should do upstream. This part of the strategy will identify traditionally “downstream” work that could be done by project applicants prior to submitting the Engineering Plan (the pre-application stage). Prime targets would be time-intensive studies or analyses that will help eliminate nonviable alternatives, such as sites with limiting factors such as air quality problems, and limited water supplies, or containing critical habitat for endangered species. The Model Process should also outline whom to contact within DNR and PSC, when contacts should be made, and the types of information that should be developed and shared with the agency ahead of the permit stage. The Model Process could also identify points of uncertainty in power plant design and construction, and separate them out for separate tracking.

3. Proactively contact potential companies and consulting firms that may be doing business in the state. Acquaint them with the state’s regulatory framework and timelines, and invite them to work with DNR early in their project planning cycle, well ahead of the permit application phase. These contacts could be done through relationships with the Department of Commerce and the PSC, a regularly occurring energy summit focusing on natural resource issues, or through focused contacts with trade organizations or companies known to do business in the state. Focus should be on relationship building, information sharing, and technical assistance on the part of DNR. There should be overlap in the people involved in this upfront work and the people who will be involved in the downstream regulatory phase. These contacts will take time to initiate and maintain, and thus cannot be undertaken without adequate staffing allocated to this work. Potential limiting factors, such as handling of proprietary information, will need to be identified and successfully resolved.

4. Develop agreements covering sharing of data and protocols for considering and evaluating environmental and ecosystem impacts. These agreements will formalize the desire to cooperate on power plant siting and construction, will detail what data will be made available to PSC and energy companies, and how resulting analyses fit into the regulatory process. For example, an energy company or consulting firm might be licensed to use endangered resources and critical habitat data, but would follow a protocol that assured early and
effective coordination with key regulatory agencies. This same data could be shared with PSC so that they have the same information used by the DNR as each entity carries out its regulatory role. Such an agreement might be folded into a larger agreement with PSC on permit review process (see item #1 above).

Next Steps

Some of the steps outlined above may already be in place or in development. And there is a wealth of agency experience with pre-application consulting and business sector consulting that can be tapped. The next step should be to firm up the proactive strategy by assessing what is already in place and what needs to be done. Key tasks will be: (1) identify what processes are currently in place or in development to avoid duplication and confusion; (2) discuss the draft upstream strategy with key stakeholders, including other agencies, to gage their interest and see how it can be improved by including their ideas, (3) examine DNR’s infrastructure and determine the best organizational platform to launch the proactive strategy, and (4) identify a management sponsor and a specific staff team or person to champion the strategy and guide it to implementation. An implementation plan will need to be developed that defines responsibilities among the various parties, estimates resources needed, and identifies actions to take on first. The proactive strategy and its implementation plan will need to be woven into other processes that the Department establishes to set work priorities.

Drafted by Betty Les, in consultation with Jeff Hanson, Duane Schuettpelz, John Shenot, Steve Ugoretz, and Jenny Bardeen, 10/29/01. Revised 11/03/01 following DNR Energy Work Group Discussion.
DATE: January 11, 2002

TO: Water Management Team

FROM: Susan Sylvester – AD/5

SUBJECT: Water Withdrawals and Water Loss Approvals for New Power Plants

The purpose of this memo is to create consistency and stability in guidance for the issuance of permits and approvals under s. 30.18 and s. 281.35, Stats., as these statutes apply to new power plants in the state. This guidance is needed primarily to clarify the process for decision-making by DNR staff on water withdrawals and losses. It supplements the guidance in my memo of November 30, 2001 dealing with permits and approvals for new power plants and is specific to the water withdrawal and water loss approval requirements of the aforementioned statutes.

In addition, this guidance will also help assure that we receive the right information from the project developers (or other parties, as necessary) and that the right people are making the decisions. This memo contains many different references to sections of the Statutes or Administrative Code and, therefore, you may need to have those references available to follow this guidance. To include excerpts from all those references would make this memo even more unwieldy and difficult to follow.

The statutes that apply to the diversion of water are complicated because of their inter-relationships and connections to one another. Additionally, the statutes are based upon some assumptions about how water use and conservation programs were to be implemented in the state. However, for a variety of reasons, not all of those actions have been implemented, and this has created processes for action that may seem less logical than the statutes may have originally envisioned. It is with this in mind that the following guidance is established to assure decisions relating to new power plants in the state employing a combined cycle system conform to the requirements of the statutes.

Assumptions

1. All steam cycle power plants that (a) withdraw surface water and/or groundwater for use in the plant and discharge directly to surface water or groundwater or (b) obtain water from another wastewater source and discharge water that remains after power plant use to a surface water or groundwater will require some sort of plan review and approval under s. 281.41, Stats., for the wastewater discharges. This may be as simple as an oil/water separator, or it could be a more complicated water use and treatment system or plant.

2. Several of the steam cycle systems that are being proposed at this time are being designed as combined cycle systems and have a water consumption or loss rate of more than 2 million gallons per day. If the water consumption rate is greater than 5 million gallons per day and the facility is located in the Great Lakes basin, additional requirements under s. 281.35(5)(b), Stats., and NR 142.07, Wis. Adm. Code, will apply.

3. A permit under s. 30.18, Stats., is not needed for these facilities, because: a) the withdrawal or diversion is not associated with the control of water levels (s. 30.18(2)(a)1.); b) the withdrawal or
diversion is not for purposes of agriculture or irrigation (s. 30.18(2)(a)2.; and c) there is, as noted above, an approval required under s. 281.41 (s. 30.18(2)(b)).

4. Because a permit under s. 30.18, Stats. is not required, there is no specific provision under s. 281.35, to require the applicant to “…submit written statements of consent from all riparian owners…” (s. 30.18(3)(a)3.) as part of the application for a water loss approval. However, the Department must evaluate and determine, in general, that “…public rights… will not be adversely affected…” and “…will not have a significant detrimental effect on the quantity and quality of waters of the state.” (s. 281.35(5)(d)1. & 6.)

5. The factors for issuance of a water loss approval under s. 281.35, Stats., for power plants that meet assumptions 1 and 2, are similar to the factors that the Department uses to issue permits under s. 30.18, Stats. The application, the decision process and the Department’s determination must, however, be based on the requirements and conditions contained in s. 281.35, Stats., and NR 142, Wis. Adm. Code.

6. Although there are two procedural “approvals” required under ss. 283.35(5) and (6), it makes most sense that we make as many of the decisions called for under s. 283.35(6) prior to making the decision under subsection (5). Those subsection (6) decisions may either be built into the prior subsection’s decision, or they could be made a clear part of the record so that everything in the decision under subsection (5) would track with what is anticipated under subsection (6).

7. The review and approval under s. 281.41, Stats., for a wastewater treatment system or plant does not have to occur simultaneously with the water loss approval under s. 281.35, Stats., nor is it necessary that the same person or persons within the Department evaluate and make the decisions and determinations on the applications or plans that are submitted under these two provisions.

8. The decision on the issuance of a water loss approval under s. 281.35, Stats., will generally be of greater significance to the overall design of the project than will the approval of plans for the wastewater system or plant under s. 281.41, Stats. It is important, therefore, that this decision be made as early as possible in the process of siting such a facility.

**Decision Process**

1. For all facilities meeting the assumptions above, the developer is notified of the need to obtain the s. 281.35, Stats. water loss approval and permit as part of the Department’s response to the engineering plan submittal (see s. 196.491(3)(a)3.a., Stats.). The developer is instructed to provide the information specified in NR 142.06(2), Wis. Adm. Code, and is also provided reference to the basis of the Department’s determinations as stated in NR 142.06(3), Wis. Adm. Code. In some instances that are likely to occur, public or private parties other than the power plant developer may be providing and/or discharging the water for the power plant and may be identified as the potential formal applicant for the water loss approval under the provisions of s. 281.35 (e.g., Heart of the Valley Metropolitan Sewerage District for Fox Energy). In this latter case, the basic decision process will not change, but there may be a need to identify the responsible parties and alter the communication linkages to assure that appropriate parties are involved in the process.

2. The Department’s determination under NR 142.06(3) will be made as a GMU collaborative effort under the guidance and direction of the Regional water project manager for the specific facility. This project manager will identify DNR staff who are best able to review and make decisions regarding
impacts on public or private water rights, impacts on the environment and ecosystem, impacts on the public interest and the other factors identified in NR 142.06(3), Wis. Adm. Code. Because this water loss review will be triggered by and relates to the provisions of the s. 281.41, Stats., plan approval, the Wastewater Permits and Pretreatment Section will provide assistance to the Regional project manager and staff to assure the water loss approval process is consistent with the approvals under the “normal” plan approval protocols. The water loss decision will normally occur earlier in the process than the wastewater system plan approval for the facility.

There may also be power plant proposals to withdraw groundwater and, as a result, require a high capacity well approval under s. 281.17, Stats. In these instances, the water loss approval will always occur in conjunction with or, more likely, prior to the approval for that high capacity well, rather than connecting to the plan approval for the wastewater system or plant under s. 281.41. The approval of a high capacity well must “…ensure…that the well meets the grounds for approval under s. 281.35, if applicable.” (s. 281.17(1)(b), Stats.) To assure the approval process is consistent with the approvals and permits under the “normal” approval and permitting protocols, the Regional water project manager should consult with the program staff in the Bureau of Drinking and Groundwater and the Bureau of Watershed Management to establish a case-specific determination of the process for reviewing the water loss application.

The decision on the water loss must be consistent with the information contained in the Environmental Assessment or Environmental Impact Statement prepared for the project. (Note: The EA or EIS will normally be prepared jointly by the Department and the Public Service Commission of Wisconsin.) Furthermore, the final decision on water loss cannot occur prior to completion of the WEPA process.

3. Plans under s. 281.41, Stats., for the wastewater treatment and disposal system may be submitted at any time, but at least 90 days prior to the beginning of construction of those treatment facilities (see NR 108.03, Wis. Adm. Code). These plans will be reviewed by the Wastewater Permits and Pretreatment Section in the Bureau of Watershed Management. This approval may occur at any time during the planning for the project, but does not have to occur simultaneously with the approval for the water loss.

4. Water project managers for projects that propose to have a water loss greater than 5 million gallons per day in the Great Lakes Basin must contact the Great Lakes and Watershed Planning Section for assistance in facilitating the review process under s. 281.35(5)(b), Stats.

If you have any questions about this guidance please contact Duane Schuettelpelz (266-0156).

cc: Duane Schuettelpelz – WT/2
   Lee Boushon – DG/2
   Mark Putra – DG/2
   Mary Ellen Vollbrecht – FH/3
   Chuck Ledin – WT/2
   Linda Talbot – WT/2
   Chuck Hammers – LS/5
   Terry Lohr – WT/2
   Dale Simon – FH/3
   Elizabeth Bier – WT/2
   Energy Workgroup
TO:  Water Management Specialists  
      Water Management Engineers  
      Regional Aquatic Habitat Experts  
      Bureau of Fisheries Management and Habitat  
      Protection – Rivers and Habitat Protection Section  
      Basin Leaders  
      Water Leaders  

SUBJECT:  Guidance on Processing Requests for Expedited Permit Reviews  

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply.  This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed.  This guidance cannot be relied upon and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources.  Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.  

Summary of Guidance  
Expedited review of a waterway or wetland application is available to applicants with payment of a supplemental permit fee.  This guidance outlines the legal requirements and sets forth the internal procedures, roles and responsibilities for responding to requests to expedite an application review.  

Background  
The expedited decision option and supplemental fees are authorized in sections 30.28, 31.39 and 281.22, Wisconsin Statutes.  NR 300, Wisconsin Administrative Code sets the procedures, fees and time limits for obtaining and making expedited decisions.  NR 305, Adm. Code identifies time limits for decisions on applications for water regulatory permits or approvals under Chapters 30 and 31, Stats.  Expediting guarantees a decision date sooner than the maximum time periods set by rule.  If the Department does not issue a decision by the guaranteed decision date, the supplemental fee is refunded.  

Note:  projects which are exempt under 30.28(3), 31.39(3) and 281.22(3) are not eligible for expedited application review.  This includes:  chapter 30 projects funded in whole or in part by any federal or state agency; permits issued under 30.12(3)(a) 2., 2m or 3; chapter 31 projects proposed by any federal or state agency; and water quality certification projects proposed by any federal or state agency.  

General Policy  
The Department will generally accept all requests for expedited application review for which the supplemental fee is collected.  Expedited applications are part of our regular workload, and will take priority.  As needed and when funding is available, staff may be assigned to work for overtime pay or compensatory time, but staff will also work on expedited applications during regular hours.  In order to minimize impacts on regular applicants and to meet guaranteed deadlines, supervisors should assign overtime or compensatory time in accordance with MC 9133 and existing Secretary’s approvals.  

Applicants for expedited reviews should be encouraged to contact Department staff about their project well in advance of submitting an application, to determine what permits may be needed and ensure that they gather all necessary information to submit a complete application.
**Procedure**

The following table outlines the standard operating procedures that should be followed in each region for processing a request for an expedited application review:

<table>
<thead>
<tr>
<th>Role</th>
<th>Process Description</th>
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<tbody>
<tr>
<td>Water Leader</td>
<td>Ensure that a regional system exists for monitoring of incoming applications for expedited requests, and assignment to WMS for preliminary review within one day of application receipt.</td>
</tr>
<tr>
<td>Applicant</td>
<td>Request expedited review of a new permit application, submit supplemental fee, and specify the desired decision date.</td>
</tr>
<tr>
<td>WMS</td>
<td><em>Within 20 days of application receipt:</em> Notify Supervisor and Aquatic Habitat Expert (AHE) of request, review application for completeness, remit fee and determine the guaranteed decision date (see paragraph following table).</td>
</tr>
<tr>
<td></td>
<td>- If application is complete, check availability of engineer, fisheries or wildlife biologist or other staff needed to assist in permit review, and determine time frame. Notify applicant in writing of the guaranteed decision date (applicant’s proposal or alternative date).</td>
</tr>
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<td></td>
<td>- If application is sufficient to commit to an expedited review but is not complete, notify applicant in writing that the project will be accepted into the expedited track. Identify the information needed to complete the application, and indicate that a guaranteed decision date will be provided once the application is complete.</td>
</tr>
<tr>
<td></td>
<td>- If application is so incomplete that you cannot determine jurisdiction or otherwise commit to a guaranteed decision date, notify the applicant in writing. Identify the information needed to complete the application and indicate that once the application is complete, the Department will respond promptly as to whether the project will be accepted into the expedited track, and if so, the guaranteed decision date.</td>
</tr>
<tr>
<td></td>
<td>- For any of the above, if WMS or other needed staff are unable to commit to an expedited review, or if weather conditions prevent jurisdictional confirmation and/or public interest review, consult supervisor and AHE.</td>
</tr>
</tbody>
</table>
| Supervisor, AHE and Water Leader | *Within 20 days of application receipt:* When WMS or other essential staff are unable to commit to an expedited review, seek assistance from staff in other basins, adjacent regions, and central office in that order. When staff are not available to work overtime or for compensatory time, identify where work on expedited applications may be done during regular hours to the extent necessary to allow acceptance of new request into expedited track.

Determine if weather conditions occur that may delay application review.

When extreme circumstances exist that may warrant denial of expedited request, consult with FH Bureau (see paragraph below table). Regional Water Leader will make decision to deny.
Within 20 days of application receipt:
Notify permit applicant in writing that request for expedited review is denied, or that the department is unable to commit to a guaranteed decision date due to weather or other circumstances (see NR300.05) and when we expect to be able to commit (if possible).

Contact applicant to determine their desire to either continue with expedited processing, or withdraw request for expedited processing based. If expedited processing is confirmed, alert affected staff and continue expedited review. If request for expedited processing is withdrawn, refund supplemental fee and process as a regular application.

During expedited review, contact applicant if at any time during an expedited review, unanticipated conditions (see NR300.05) will delay a decision.

Several steps above identify notifying the applicant in writing, to ensure that the applicant is clear about our decision-making process. Where it is helpful to increase efficiency and customer service, communicating these decision points may be made by telephone, and written correspondence consolidated (e.g. one letter to accept into expedited track and send out public notice).

Determining the Guaranteed Decision Date
We should evaluate each application and consider a number of factors in determining what guaranteed decision date we are able to offer. Take into account factors such as:

- Statutory and code deadlines
- Workload and availability of staff needed for the review
- Work that you and other reviewers will have to do – e.g. complex cases or atypical issues may require more time
- Necessary steps in the permit process (e.g. 30-day public notice)
- Weather conditions that affect ability to make jurisdictional determination or site inspection
- The applicant’s requested decision date

If we cannot meet the applicant’s requested decision date, but can offer an alternative expedited decision date, communicate the alternative date and the reasons clearly to the applicant.

In letters committing to expedited review, include conditions for exceptions to the guaranteed date for factors as specified in NR300.05 that are beyond the Department’s control.

Denying Expedited Requests
All efforts should be made to accept requests for expedited permit review, but there may be extreme circumstances that necessitate a request being denied. The primary example would be where staff vacancies and/or volume of pending permit requests make it impossible to accept a new expedited permit request without causing us to exceed statutory deadlines in processing (and potentially refund fees for) more than four regular permit applications. Expedited requests for projects where no fee is required are not eligible for expedited review by statute.

Each decision to deny a request for expedited permit review must be made by the Regional Water Leader after completion of all steps in the table above. Consultation with the FH Bureau is to provide technical assistance to the region, and provide notification to the Bureau that a denial is being considered. The Regional Water Leader then directs the WMS, AHE or Supervisor to notify the applicant that the request is denied, by a letter sent within 20 days of application receipt.
Regional Flexibility
While the table and guidance above establish the statewide procedure for handling expedited permit requests, certain issues and details are best handled through a local procedure. For example, a region may designate one WMS to be the primary contact for all expedited requests, or a region may have a policy that each WMS handle the expedited requests in their assigned counties. Similarly, a region or basin may choose to have a certain WMS handle expedited requests from a particular permit applicant (e.g. MMSD) based on established working relationships, long-term involvement in project planning, specialized technical knowledge, or specialized familiarity with a particular resource. Once an expedited permit is issued, the region may choose how to handle compliance inspections and permit follow-up – e.g. these responsibilities may remain with the permit writer, or the permit file and follow-up responsibilities may be transferred to the county WMS (if different).

Drafted by Liesa Nesta
Approved by Aquatic Habitat Coordinators – August 16, 2002
TO: Water Management Specialists
   Water Management Engineers
   Regional Aquatic Habitat Experts
   Bureau of Fisheries Management and Habitat
   Protection – Rivers and Habitat Protection Section

SUBJECT: Guidance for the Establishment of Protective Areas for Wetlands in Runoff Management Rules, Wisconsin Administrative Code NR 151

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

Summary of Guidance

NR 151.12(5)(d) Protective areas.

Chapter NR 151, Wis. Adm. Code, establishes runoff pollution performance standards for non-agricultural facilities and transportation facilities and performance standards and prohibitions for agricultural facilities and practices designed to achieve water quality standards.

Protective areas are established to minimize impacts from runoff coming from developed areas before it reaches sensitive resources. The protective area begins at the delineated boundary of the wetland. The width of the protective area is measured horizontally from the nearest edge of the wetland to the nearest edge of an impervious surface. Special restrictions exist in protective areas to allow them to filter runoff and reduce the potential for adverse impacts to wetlands. For wetlands, the size of the protective area is based upon the location, type and condition of the wetland. There are three protective area categories:

Category 1: 75 feet
A protective area width of 75 feet is established for wetlands in areas of special natural resource interest, as defined in NR 151.12 (5)(d)1.a, Adm. Code. Wetlands in areas of special natural resource interest include wetlands both within boundaries of designated areas of special natural resource interest and those wetlands that are in proximity to or have a direct hydrologic connection to such designated areas. Wetlands that have a groundwater or surface water connection to an area of special natural resource interest are treated as Category 1 wetlands. The
following are the designated areas of special natural resource interest in NR 103.04:

(1) Cold water communities as defined in s. NR 102.04(3)(b), including all trout streams and their tributaries and trout lakes;

(2) Lakes Michigan and Superior and the Mississippi river;

(3) State and federal designated wild and scenic rivers, designated state riverways and state designated scenic urban waterways, s. 30.26, Stats., ch. NR 302, 16 USC 1271 to 1287, ss. 30.40 to 30.49, Stats., and s. 30.275, Stats.;

(4) Unique and significant wetlands identified in special area management plans (SAMP), special wetland inventory studies (SWIS), advanced delineation and identification studies (ADID) and areas designated by the United States environmental protection agency under s. 404(c), 33 USC 1344 (c);

(5) Calcareous fens;

(6) Habitat used by state or federally designated threatened or endangered species, s. 29.604, Stats., ch. NR 27 and 16 USC 1531 to 1543;

(7) State parks, forests, trails and recreation areas;

(8) State and federal fish and wildlife refuges and fish and wildlife management areas;

(9) State and federal designated wilderness areas (16 USC 1131 to 1135 and s. NR 1.415);

(10) Designated or dedicated state natural areas established under ss. 23.27 to 23.29, Stats.;

(11) Wild rice waters; and

(12) Any other surface waters identified as outstanding or exceptional resource waters in ch. NR 102.

Category 2: 50 feet
Category 2 includes wetlands that are called “highly susceptible wetlands”, which require a protective area width of 50 feet pursuant to s. NR 151.12(5)(d)1.d., Adm. Code. Highly susceptible wetlands include the following wetland plant community types: fens, sedge meadows, bogs, low prairies, fresh wet meadows, shallow marshes, deep marshes, seasonally flooded basins, conifer swamps, shrub swamps and other forested wetlands. This category includes most of the wetland types found in Wisconsin. A special rare wetland type, calcareous fens, is included in Category I as a wetland in an area of special natural resource interest.
Category 3: 10% of the Average Wetland Width – 10 to 30 feet

This category is designated for wetlands considered “less susceptible” that require a protective area width of 10% of the average wetland width, but not less than 10 feet nor more than 30 feet pursuant to s. NR 151.12(5)(d)1.e., Adm. Code. These wetlands include significantly degraded wetlands that are dominated by invasive species such as reed canary grass (*Phalaris arundinacea*). Although NR 151 lists only reed canary grass, other invasive species may significantly degrade wetlands. Purple loosestrife (*Lythrum salicaria*) and non-native strains of common reed grass (*Phragmites australis*) are also common, widespread invasive plant species found in wetlands. To be considered dominated by invasive species means the wetland contains over 90% of the species as measured by percent vegetative cover.

**Average Wetland Width**

The following procedure is recommended for calculating the average width of a wetland:

Step 1. Draw a centerline that runs across the long axis of the wetland. This is not necessarily a straight line but one where half of the wetland area is located on each side of the centerline.

Step 2. Make at least 5 individual measurements across the wetland that are perpendicular to the centerline established under step 1. Enough measurements shall be taken to establish a representative average wetland width. These measurements shall be made equidistant apart along the centerline established under step 1. If the wetland has a configuration with a relatively long narrow strip that is connected to a much broader area, then the wetland area calculation may be broken up into separate areas with the average wetland width established for each separate area.

Step 3. The wetland’s average width shall be the arithmetic average of the individual measurements taken under step 2.

Attachment 1 is an example calculation titled *Calculating Wetland Width*.

**Determining the Wetland Category**

Category 1 wetlands are generally determined by their location in or adjacent to special designated areas. For instance, a wetland hydrologically connected to a trout stream or adjacent to Lake Michigan is a Category 1 wetland. A locational exception is calcareous fens, a type of wetland plant community found in areas of upwelling, mineral-rich water. These wetlands are rare and can be identified by the vegetative species found growing in them. Examples of common plants that occupy calcareous fens include shrubby cinquefoil (*Pentaphylloides floribunda*), wild timothy (*Muhlenbergia glomerata*), Ohio goldenrod (*Solidago ohioensis*) and lesser fringed gentian (*Gentianopsis procera*).
Most wetlands will fall into Category 2. Wetland community types can be determined by using Attachment 2, *Key to the Wetland Plant Communities*, from Eggers and Reed, 1997. Guides such as *Wetland Plants and Plant Communities of Minnesota & Wisconsin*, US Army Corps of Engineers, 1997, further describe wetland plant communities and typical plants found within those communities and are helpful in classifying wetland types.

In some cases, heavily disturbed wetlands are totally dominated by invasive plant species. These wetlands generally fall into Category 3. However, care must be taken to avoid adversely impacting small, intact wetland plant communities within an otherwise monotypic invasive plant community. In wetlands where intact native communities are located within a monotypic stand of invasive plants, the higher designation should be applied. The width of the protective area should be measured from the edge of the wetland.

Also, some wetland plant communities may be altered by human modifications to change the character of the wetland. This is most commonly encountered in agricultural areas where drier wetlands are farmed. During certain times of the year, a wetland may be unvegetated or it may support non-wetland species, such as corn or soybeans. These areas are still considered wetlands if they are capable of supporting wetlands species in the absence of the human modification, such as the cessation of farming. The wetland should be classified on the basis of the plant community that would normally be supported in the absence of the disturbance. This can be determined using the disturbed area procedures in the 1987 US Army Corps of Engineers Wetland Delineation Manual.

*Wetland Boundary Delineation*

The 1987 Corps of Engineers Delineation Manual and subsequent guidance documents establish the standard and accepted techniques for identifying and delineating wetlands in Wisconsin. The Army Corps of Engineers Regulatory IV training manual contains all of the applicable guidance documents and training materials for making a determination. While many wetland determinations are clear and boundaries abrupt, disturbed or problem areas are common. Examples of these areas include farmed wetlands, seasonal wetlands (wetlands that do not have obvious wetland hydrology) and areas of sandy or lacustrine clay soils. It is advisable for qualified individuals with Regulatory IV training to make determinations in these difficult areas.
**Calculating Wetland Width**

Average wetland width = 220’

\[
\frac{(255+205+95+155+280+330)}{6}
\]

Protective width = 10% \times 220’ = 22’
Attachment 2
Key to the Wetland Plant Communities

1A. Mature trees (diameter breast height [dbh] of 6 inches or more) are present and form closed stands (more than 17 trees per acre; more than a 50 percent canopy cover) on wet, lowland soils (usually floodplains and ancient lake basins).

2A. Hardwood trees are dominant; usually alluvial, peaty/mucky, or poorly drained mineral soils.

3A. Silver maple, American elm, river birch, green ash, black willow and/or eastern cottonwood are dominant; growing on alluvial soils associated with riverine systems

3B. Black ash, yellow birch, silver maple and/or red maple are dominant; northern white cedar may be subdominant; growing on poorly drained mineral or peat/muck soils, often associated with ancient lake basins.

FLOODPLAIN FOREST

HARDWOOD SWAMP

2B. Coniferous trees are dominant; soils usually peaty.

4A. Tamarack and/or black spruce are dominant; growing on a continuous sphagnum moss mat and acid, peat soils

4B. Northern white cedar and/or tamarack are dominant; continuous sphagnum moss mat absent; usually growing on neutral to alkaline peat/muck soils.

CONIFEROUS BOG

CONIFEROUS SWAMP

1B. Mature trees are absent or, if present, form open, sparse stands; other woody plants, if present, are shrubs or saplings and pole-size trees (dbh less than 6 inches) less than 20 feet high and growing on wet, lowland or poorly drained soils, or in groundwater seepage areas.

5A. Community dominated by woody shrubs.

6A. Low, woody shrubs usually less than 3 feet high; sphagnum moss mat layer may or may not be present.

7A. Shrubs are ericaceous and evergreen growing on a sphagnum moss mat layer; peat soils are acidic

7B. Shrubs are deciduous, mostly shrubby cinquefoil, often growing on sloping sites with a spring-fed supply of internally flowing, calcareous waters; other calciphiles are also dominant; sphagnum moss mat layer absent; much/poorly drained mineral soils are alkaline

OPEN BOG

CALCAREOUS FEN

6B. Tall, woody deciduous shrubs usually greater than 3 feet high; sphagnum moss mat
layer absent..................................................SHRUB SWAMPS

8A. Speckled alder is dominant; usually on acidic soils in and north of the vegetation tension zone...........................................ALDER THICKET

8B. Willows, red-osier dogwood, silky dogwood, meadowsweet and/or steeplebush are dominant on neutral to alkaline poorly drained muck/mineral soils; found north and south of the vegetation tension zone....................................................SHRUB-CARR

5B. Community dominated by herbaceous plants.

9A. Essentially closed communities, usually with more than 50 percent cover.

10A. Sphagnum moss mat on acid peat soils; leatherleaf, pitcher plants, certain sedges and other herbaceous species tolerant of low nutrient conditions may be present.................................................................OPEN BOG

10B. Sphagnum moss mat absent; dominant vegetation consists of sedges (Cyperaceae), grasses (Poaceae), cattails, giant bur-reed, arrowheads forbs and/or calciphiles. Soils are usually neutral to alkaline poorly drained mineral soils and mucks.

11A. Over 50 percent of the cover dominance contributed by the sedge family, cattails, giant bur-reed, arrowheads, wild rice and/or giant reed grass (Phragmites).

12A. Herbaceous emergent plants growing on saturated soils to areas covered by standing water up to 6 inches in depth throughout most of the growing season.

13A. Major cover dominance by the sedges (primarily genus Carex)..........................................SEDGE MEADOW

13B. Major cover dominance by cattails, bulrushes, water plantain, Phragmites, arrowheads and/or lake sedges.

..........................................................SHALLOW MARSH

12B. Herbaceous submergent, floating and emergent plants growing in areas covered by standing water greater than 6 inches in depth throughout most of the growing season............................................DEEP MARSH

1Buckthorns (Rhamnus spp.) may occur as dominant shrubs or small trees in disturbed shrub-carrs

11B. Over 50 percent of the cover dominance contributed by grasses (except wild rice and Phragmites), forbs and/or calciphiles.
14A. Spring-fed supply of internally flowing, calcareous waters, often sloping sites; calciphiles such as sterile sedge, wild timothy, Grass-of-Parnassus and lesser fringed gentian are dominant…………………………………………………………..CALCAREOUS FEN

14B. Water source(s) variable; calciphiles not dominant.

15A. Soils saturated to inundated during the growing season; prairie grasses such as big bluestem, prairie cordgrass and/or Canada bluejoint grass are usually dominant, and various species of lowland prairie forbs are present.
……………………………………………………………………………………………………………….WET TO WET-MESIC PRAIRIE

15B. Site rarely inundated, but soils are saturated for all or part of the growing season; dominated by forbs such as giant goldenrod and/or grasses such as redtop and reed canary grass.
……………………………………………………………………………………………………………………FRESH (WET) MEADOW

9B. Essentially open communities; either flats or basins usually with less than 50 percent vegetative cover during the early portion of the growing season, or shallow open water with submergent, floating and/or floating-leaved aquatic vegetation.

16A. Areas of shallow, open water (to 6.6 feet in depth) dominated by submergent, floating and/or floating-leaved aquatic vegetation.
……………………………………………………………………………………………………………………SHALLOW, OPEN WATER COMMUNITIES

16B. Shallow depressions or flats; standing water may be present for a few weeks each year but are dry for much of the growing season; often cultivated or dominated by annuals such as smartweeds and wild millet.
……………………………………………………………………………………………………………………SEASONALLY FLOODED BASIN
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WATERWAY AND WETLAND HANDBOOK

CHAPTER 15

PERMIT PROCESS FOR CHAPTER 30 ACTIVITIES

DISCLAIMER

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance cannot be relied upon solely and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources (DNR or Department). Any regulatory decision made by DNR in any matter addressed by this guidance will be made by applying the governing statutes, common law and administrative rules to the relevant facts.

A. Purpose

As described in Chapter 10 of this handbook, Wisconsin’s navigable waters are public features held in trust under the custodianship of the state. This “public trust doctrine” has been in place since the time of Wisconsin’s enabling legislation, and numerous state statues and administrative rules define the authority of the state in regulating waterway and wetland activities.

Thousands of development activities occur in and along Wisconsin’s lakes, rivers, and streams each year. Without careful oversight, development occurring in or adjacent to water bodies can adversely affect aquatic and riparian habitat, fish and wildlife abundance and diversity, water quality, and natural scenic beauty—all of which are public rights available to all Wisconsin citizens. In turn, Wisconsin’s water regulations seek to protect the state’s waterways and adjacent land areas from the potentially detrimental effects associated with development.

More specifically, water regulations work to:

a. resolve conflicts that arise between the many different users of Wisconsin’s waterways;
b. preserve the ecosystem values and functions that are necessary for healthy fish, wildlife, and human populations; and
c. protect the public interest in the waters of the state.

This chapter provides an overview of the procedures used to make waterway permit decisions and is intended to provide a summary overview of the permit review process. This chapter is not intended to replace existing guidance but rather seeks to organize information applicable to waterway permit reviews in one location. Furthermore, specific review procedures or design considerations for permitted activities are not discussed in this chapter. For this information the user should refer to the handbook chapter on that particular activity, where applicable.
Additionally, this chapter focuses on waterway permitting authorized by Chapter 30 of the Wisconsin Statutes. Wetland activities, which may have a direct link to a Chapter 30 permit, are principally regulated by Chapter 31 of the Wisconsin Statutes. The wetland permit review process is not addressed in this document. Similarly, large utility projects and Department of Transportation projects—even though regulated by Chapter 30—involves different permit process steps than standard Chapter 30 reviews and are not discussed in this chapter.

B. Background on Waterway Permitting

Regulations provide the framework for protecting Wisconsin’s water resources, and waterway permits are the mechanism through which this framework is implemented. Permits ensure that development proposals that may affect public waters are planned and designed so that they adhere to established rules and regulations. As a result, waterway permits help to protect public safety and the rights of all citizens to use and enjoy the state’s public waterways.

Chapter 30 of the Wisconsin Statutes outlines the regulatory framework for Wisconsin’s navigable waterways. Chapter 30 identifies those activities for which a waterway permit is required, describes the circumstances under which activities are exempt from permitting requirements, and identifies the type of permit required when permitting is necessary. Examples of activities requiring permits include the placement of structures in or near waterways, shoreline erosion control measures, dredging, and water withdrawals.

The historical context of water regulation in Wisconsin and fundamental water regulation concepts are discussed in Chapter 10 of this handbook. This chapter discusses some of the key components of Wisconsin’s waterway regulations and presents a summary of the process through which development proposals are reviewed and permit decisions made by the Wisconsin Department of Natural Resources (hereafter referred to as “the Department”).

C. Overview of Wisconsin Waterway Permit Types

Under the framework established in Chapter 30, there are two primary types of waterway permits in Wisconsin—general permits and individual permits. In addition to these two permit types, exemptions from permitting requirements are possible under certain circumstances.

Exemptions

Certain types of activities or proposed project locations may result in only minor or inconsequential impacts to the public interest. In such cases, the activity or location may be specified in statute as eligible for a permit exemption. The purpose of an exemption is to allow activities considered to have low environmental risk to proceed without the detailed project review that occurs for a permit application.

Exemptions from Wisconsin’s waterway permitting requirements are outlined in the various subsections of Chapter 30 that correspond with the activities for which exemptions are allowed. Exempt activities must meet the stipulations contained in Chapter 30 and the
minimum requirements defined by the Department. By law (NR 1.05 – NR 1.06), some exemptions are not allowed in "areas of special natural resource interest" (ASNRI) or in locations of "public rights features" (PRF). Specific standards for each of the activities where an exemption is available can be found in activity-specific sections of Chapter 30 and on the Department’s website.1

**General Permits**

A general permit (GP) authorizes activities that follow the design, construction, and location specifications defined by administrative rule. General permit specifications are designed in a way to minimize adverse environmental impacts. Since GPs are devised in a way to avoid damaging critical habitat, GPs can be granted for projects occurring in or along designated waters as defined in NR 1. Only certain activities are eligible for GPs, and currently, over thirty activity types qualify.

To obtain approval for a GP, an applicant need only demonstrate that the proposed project adheres with the specifications and conditions for an eligible activity. This is accomplished by submitting a General Permit application form, on which the applicant answers basic questions about project location and design and provides any necessary calculations and illustrations of the project’s design.

The Department determines whether an applicant’s proposal is consistent with relevant GP specifications. If the activity is not eligible for a GP, if the proposal does not conclusively demonstrate consistency with the relevant specifications, or if the activity is determined to impact species of concern or public rights, the Department will notify the applicant that an individual permit is required (a process known as permit “recall”). By requiring an individual permit, the Department can conduct a more thorough review of the project’s potential impacts and ensure the public trust is protected.

**Individual Permits**

For activities that do not meet the permit exemption criteria or specifications for general permits, an applicant can apply for an individual permit (IP). IPs are issued by the Department for projects that do not have design, location, and construction specifications defined by administrative rule; therefore, a detailed application and site-specific review process is required. Similar to the review of GPs, the IP process allows the Department to review applicable fishery, wildlife, and water quality data. However, the IP process differs from the GP process in two key ways—a public comment period is required and Department staff is required to visit the site to observe navigation patterns, habitat, and other site features.

The IP public comment period involves notifying the general public of the proposal through a website and newspaper notice and notifying interested parties through a direct mailing. During the comment period, any party with an interest in the project may request an informational

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1 [http://dnr.wi.gov/waterways/about_us/permit_process.html#exemptions](http://dnr.wi.gov/waterways/about_us/permit_process.html#exemptions)
hearing. Department staff provides information about the project during the informational hearing, as well as gathers information from others with knowledge of the site or project to assist with the permit decision-making process.

If the Department’s review of an IP application concludes that public rights are not adversely affected, the Department will approve the IP request and attach any permit conditions that may be needed to ensure the public trust is protected and resource concerns addressed.

D. Waterway Permit Procedures

When an applicant submits a permit application, the Department first performs permit intake, which is followed by a review of the application by a Water Management Specialist for consistency with the requirements of Chapter 30. Many stages of permit review carry statutorily-directed review timelines. Review timelines are explained further in each of the following sections, as well as depicted in the permit review flow charts at the end of this chapter. This section of the document will provide a summary overview of permit intake, the review of individual and general permits, and the permit decision. Please refer to pertinent manual codes or other established procedures or protocols for the most detailed guidance.

Intake Process

In order to provide consistent service to permit applicants statewide, as well as to have the ability to adjust work load amongst staff, the Department performs centralized permit intake. The following information summarizes some of the key permit intake functions; please refer to the most current permit intake standard operating procedure document as the current guidance on intake procedures.

Permit intake applies only to applications for general and individual permits (exemption determination requests are submitted to the Department’s Central Office in Madison and do not follow the intake procedures described here). Following the submittal of a permit application to the Department, the intake function involves a review of the application for completeness and an initial screening of the application for certain elements. This initial review must be conducted within 30 days from the date the application is received and date-stamped. It is important to note that permit intake is not a technical review of application information or an assessment of the validity of submitted materials. As such, the intake review does not

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2 Manual Codes related to permit processing are MC 3506.1, and MC 1241 http://intranet.dnr.state.wi.us/int/mb/search/

3 The most current intake procedures are located on the Waterway and Wetland Program Guidance Topic List, under the topic “Permit Intake”. http://intranet.dnr.state.wi.us/int/water/fhp/wms/pages/Prog_Guide_Topic_List.shtml

4 This 30 day period also includes the time the WMS staff has to determine whether the information provided is sufficient to issue a permit decision and conduct an Environmental Assessment (see Individual Permit Review Section) so it is essential that intake conduct the initial review as fast as possible to give WMS staff enough time for their review.
influence permit determinations other than to identify whether additional information is
needed to complete the application and issue a decision.

Chapters NR 310.10(2) and NR 310.14(1)(b) of the Wisconsin Administrative Code provide the
authority for requiring complete information from an applicant prior to rendering a decision.
These chapters state that applicants for general permits and individual permits, respectively,
“shall submit an application on a form provided by the department and shall provide all the
information requested on the form and accompanying instructions.” The required information
varies by activity but includes, at a minimum, a signed application form, a project site map, a
description of the proposal, and the appropriate application fee. Other pieces of information
may be required, which are specified in the application package for each regulated activity.

In addition to verifying completeness, permit intake also includes the following functions:

- **Verify jurisdiction** – In reviewing an application for completion, it may become clear that
  the Department does not have jurisdiction over the project, in which case a DNR permit
  is not needed. Where no DNR jurisdiction exists, the application should be dismissed.

- **Identify priority applications** – All applications that have critical timing requirements
  (e.g. expedited applications or Memorandum of Agreement (MOA) terms between the
  U.S. Fish and Wildlife Service or Natural Resources Conservation Service) are identified
during intake, and this information is noted in the application and relayed to the WMS
  that will perform the application review.

- **Process fees** – It is at intake that the correct permit fee is determined\(^5\) and the
  applicants’ payments processed. The current fee for GPs is $300 and for IPs $600.
  Expedited applications have different fees; Wetland GPs and IPs have different fees and
  there are also fees for non-permit process items. See the most current fee sheet online
  for program fees\(^6\). Generally, for GPs, a separate fee is collected for each activity, and
  multiple actions on a single waterway may constitute separate projects and require
  separate fees. The process for determining the appropriate fee for a given proposal is
detailed in the waterway and wetland database guidance document\(^7\). After-the-fact
  permit requests (submitted after work has been commenced or completed) require
twice the normal fee for that particular activity. When more than one permit application
  fee applies to a project, the Department is able to charge a fee for each permit
  application whereas the total project fee is the sum of all application fees.

- **Identify Designated Waters** – Using the web-based Surface Water Data Viewer, the
  intake review involves research of the relationship of the project to designated

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\(^5\) In accordance with Chapter NR 300.06 of the Wisconsin Administrative Code and Chapter 30.28 of the Wisconsin Statutes
\(^6\) [http://dnr.wi.gov/waterways/permit_apps/feesheet.pdf](http://dnr.wi.gov/waterways/permit_apps/feesheet.pdf)
\(^7\) [http://intranet.dnr.state.wi.us/waterwaypermit/welcome.aspx](http://intranet.dnr.state.wi.us/waterwaypermit/welcome.aspx) click on Guidance Document link
waterways, which are waters containing features that affect permit requirements. Examples include Areas of Special Natural Resource Interest (ASNRI), Public Rights Features (PRF) and Priority Navigable Waterways (PNW), the definitions of which can be found in Wisconsin Administrative Code Chapter NR 1.

- **Review Natural Heritage Inventory information** – Using the Natural Heritage Inventory (NHI) Portal, intake determines whether the proposed activity is located in an area that contains known or suspected rare species (including threatened and endangered species) or natural communities native to Wisconsin. If this screening results in a “hit,” the application is considered incomplete. The NHI data is then added to the file for review and follow-up by the WMS. The WMS is responsible for assessing the potential impact of the activity and coordinating with appropriate experts as necessary.

  Information derived from the NHI portal is considered confidential and should be treated as such. In the event a permit application is subject to a public disclosure request, NHI information can be removed from the file and need not be disclosed.

- **Identify potential archaeological/historical resources** – Intake includes a review of the proposal for its potential to affect archaeological and historical resources, which involves an assessment of the project “footprint” against the Department’s “Historical and Archeological Site Maps” website (see manual code 1810.1 and Wisconsin Statutes, Chapter 44.40).

- **Issue self-certification of certain general permit applications** – In an effort to address budget and staffing shortfalls, the Water Division of the Department directed all programs to implement workload reduction efforts beginning in 2009. To comply with this directive, the Waterways Policy and Management Team (PMT) developed a set of criteria that allow for the pre-screening of GP applications during intake, which results in only certain categories of GPs being forwarded to a WMS. Activities with historically high compliance and low environmental risk are not forwarded to a WMS; rather, the applicant is notified after intake that they can proceed with the project contingent upon the applicant’s self-certification that the project meets all statutory requirements and will meet all permit conditions. The current list of activities for which self-certification letters are issued is outlined in a memo issued by the PMT on July 1, 2011 (Appendix 2).

**Complete Applications**

Applications providing all of the required application materials and the appropriate fee are considered complete. When an application is determined to be complete, intake proceeds to the following steps:

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8 Please note that the most up to date triage list will be located on the Waterway and Wetland Program Guidance Topic List, under the topic “Permit Intake”. [http://intranet.dnr.state.wi.us/int/water/fhp/wms/pages/Prog_Guide_Topic_List.shtml](http://intranet.dnr.state.wi.us/int/water/fhp/wms/pages/Prog_Guide_Topic_List.shtml)
Determine the appropriate number of permit dockets using the waterway and wetland database guidance document

Log the application into the waterway and wetland database (refer to later section)

Remit fees

Send a copy of the application to the U.S. Army Corps of Engineers and affected tribes, if applicable

Create a physical file folder for the application

Send an acknowledgement letter to the applicant identifying the application received date and the WMS assigned to the permit proposal; if the application is eligible for self-certification, send the appropriate documentation to the applicant

Complete the intake documentation form

Send the application package to the appropriate WMS (as long as the application is not eligible for applicant self-certification, explained earlier and in Appendix 2)

Incomplete Applications

A permit application that does not contain all of the required elements and all necessary supporting information is incomplete. When an application is incomplete, the applicant is notified in one of two ways:

- For applications missing only minor items (e.g. missing fee, unsigned form, etc.), the applicant is notified via telephone or email of the information needed.

- For applications with major flaws or omissions (e.g. incorrect application form, missing photographs, missing calculations, etc.), the entire application package and the permit fee is returned to the applicant along with the appropriate form letter from the database. The letter indicates what information is needed to complete the application.

Permit Review & Decision

Following the intake process, application packages determined by intake to be complete are forwarded to a WMS for review. Upon receiving a permit application, the WMS is responsible for reviewing the proposed activity for compliance with Chapter 30 regulations, communicating with the applicant as needed to obtain additional information or clarification, and maintaining an updated permit record in the waterway and wetland permit database.

The specific requirements for each of the activities regulated under Chapter 30 are outlined in other handbook chapters and permit guidance documents. This section provides an overview of some key considerations of permit review but does not supplant existing guidance.

What is a Permit Decision?

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9 Please note that the most up to date intake documentation form will be on the Waterway and Wetland Program Guidance Topic List, under the topic “Permit Intake”.

http://intranet.dnr.state.wi.us/int/water/fhp/wms/pages/Prog_Guide_Topic_List.shtml
A review of a permit application leads to a permit decision, which may be an approval of the project, an approval of the project with modifications or conditions, or a denial of the project. A “decision” is defined by Wisconsin Administrative Code (NR 300.03(3)) as “written permission, denial of permission or dismissal of an application in accordance with procedural and substantive requirements of law.” Manual Code 1241 outlines the delegation of authority for all Department actions and determinations required by law, stating that the Secretary of the Department has decision-making authority unless otherwise delegated. This delegation occurred through Manual Code 3506.1 (adopted in 1989), which grants the authority to approve or deny Chapter 30 waterway permits to Water Management Specialists.

While Water Management Specialists have the authority to issue permit decisions, they must do so in accordance with the standards defined by Chapter 30 and the timelines provided in statute and administrative rule. Chapter NR 310 of the Wisconsin Administrative Code provides timelines for exemption determination requests, general permits, and individual permits. Additionally, Sections 30.206 and 30.208 of the Wisconsin Statutes provide further detail about the timeframes for general permit and individual permit decisions, respectively. Specific timelines are highlighted in the following sections, which describe the review process for each of the three primary permit types.

### General Permits

General Permits are available for certain categories of activities that meet the design, construction, and location specifications identified by the Department. Section 30.206(1)(am) of the Wisconsin Statutes gives the Department authority to issue general permits for any activity regulated under Chapter 30 Wis. Stats. Section 227.01(13)(rt) of the Wisconsin Statutes eliminates the requirement to create general permits through rule making (hereby referred to as “rule GPs”), and Section 30.206(5m) Wis. Stats. creates an administrative process that involves a public notice, hearing, and comment period along with a legislative committee review to create new general permits (hereby referred to as “statewide GPs”). Project applicants must apply for a GP at least 35 days prior to commencing the project, and the proposal must be submitted on the appropriate form available on the Department’s website. Except for the General Permit activities that are eligible for applicant self-certification, all GP decisions are issued by a WMS.

### Reviewing General Permits

Upon receiving a GP application from intake, the WMS evaluates the technical merits of the application and determines whether the project meets the applicable GP standards. The focus of the WMS review is whether the submitted plans and location are eligible for a GP, and application review includes the following functions and considerations.

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10 These timelines and any part of state statute are subject to amendment by the Wisconsin Legislature, as demonstrated by 2011 Act 167, which amended key review timelines for Individual Permits.

11 Section 30.206 (1r) of Wisconsin Statutes describes how we will treat the transitions between these two types of general permits, by stating that any rule GP that is valid on July 1, 2012 shall remain valid until the date upon which a statewide GP that authorizes the same activity becomes effective.
Figure 2 shows a graphical flow chart representation of the following steps:

- The WMS has 30 days following receipt of an application to determine whether the information provided is sufficient to review the application and issue a permit decision. If the available technical information is insufficient to conduct the review, the WMS must notify the applicant in writing within 30 days of the date of receipt and describe the information required to complete the application (NR 310.11(4)). The applicant subsequently has 30 days to respond to the request.

- A request to an applicant for additional information does not initiate a new 30-day review period; rather, the review period pauses until the necessary information is received. The Department can request additional information once during review, and if the requested information is not received within 30 days after the applicant is notified in writing, the Department may dismiss the application (NR 310.11(7)).

- If the intake screening shows the potential presence of a species on the Natural Heritage Inventory (NHI) Working List, the WMS must notify the applicant about the need for an incidental take permit or the need to revise plans to avoid the species. The WMS will conduct an Environmental Assessment as necessary, which may require additional information from the applicant. Identification of a species on the NHI Working List causes the application to become incomplete, and the review clock pauses until the issue is resolved.

- For potential archaeological or historical resource impacts, the WMS must contact the Department’s archaeologist or cultural resources specialist. The archaeologist/cultural resources specialist has 30 days to make a determination or to request an extension of time, which is not to exceed an additional 30 days (Chapter 44.40 (2)(b)).

- The presence of archaeological or historical resources does not affect the completeness of the application, but if review reveals likely impacts, a permit recall is necessary under s. 30.206(3r). Similarly, the applicant may withdraw a GP application with potential impacts until the issues are resolved and resubmit a complete application at a later time.

- If review of a GP application indicates the proposed activity is exempt, the WMS should complete an EDR on behalf of the applicant, send the EDR to the Central Office for processing, and notify the applicant.

- When reviewing applications, staff should use as many tools as are necessary to make an accurate determination. Site visits should be minimized for GPs, and staff is
encouraged to use available computer tools (summarized later in this chapter) and engage in discussions with relevant Department staff or other experts.

- When an applicant submits a General Permit application that will not be approved (i.e. does not meet necessary standards) but could be approved if modified, the WMS reviewing the permit may contact the applicant to recommend that the project be modified in order to gain approval. This is an acceptable form of technical assistance. Permit decisions must still be issued within the established statutory timeframes, regardless of the suitability of the application.

### Generating a General Permit Decision

- If review shows that a GP proposal is consistent with General Permit standards, the permit must be issued and a decision document sent to the applicant within 30 days.

- If the review of the GP application indicates the proposal is not eligible for a GP or otherwise does not meet GP standards, a letter must be sent to the applicant within 30 days indicating an IP is needed (referred to as permit recall; see discussion later in this section).

- If an applicant receives no indication from the Department within 30 days that additional information is needed or a different permit required, the activity is considered authorized by the general permit (i.e. presumptive approval). The applicant may then proceed with the project on the basis of presumptive approval as long as the project is carried out in compliance with all applicable GP standards.

### After the General Permit Decision

- Applicants are legally bound to follow the project plan approved by the permit, as well as the GP standards for the applicable activity. Failure to follow the conditions of the permit will result in a violation, and the action will be subject to enforcement proceedings. The WMS can attach a copy of the standards and conditions for the particular activity to the approved permit so that this information is clear to the applicant.

- For General Permits that were promulgated through the administrative rules process (hence dubbed “Rule GPs”), section 30.2095 (1) (a) of the Wisconsin Statutes states that the activity or project must be completed within 3 years after the permit is issued. If the project is not completed by the expiration date, the permit is void and the permit holder has no opportunity to seek a permit extension.

- For General Permits that were created through the statewide process (hence dubbed “Statewide GPs”), section 30.206(1)(b) Wis. Stats. allows Statewide GPs to

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12 From Feb. 6th, 2004 – August 1st, 2012 the Department could only create General Permits through Administrative Rule making.
be valid for five years from the date of issuance or until the activity is completed, whichever occurs first.

- Rule GPs issued on or before July 1, 2012 remain valid until the date upon which a Statewide general permit issued under sub. (1) (a) or (am) that authorizes the same activity becomes effective.

- An applicant cannot revise plans approved under a GP. The applicant must submit a new GP application with revised plans and the appropriate fee. Refunds of standard fees are made only if the applicant withdraws their application and requests a refund before the Department determines that the application is complete.

- When a property changes hands, any approved permits stay with the property, and the new owner must follow approved plans if they wish to pursue the same project. To track changes in ownership, the WMS should note the new property owner in the permit database. Note that some permits are required to undergo a formal transfer with a change in ownership (e.g. irrigation permits and dam transfers).

- Chapter 30.28(2r) allows an applicant to request expedited permit review. The Department should verify whether it is able to comply with the request, and if expedited review is possible, the Department should notify the applicant and can charge a supplemental fee for this service.

**Permit Recall**

Under s. 30.206(3r) of the Wisconsin Statutes, the Department may require an applicant for a GP to apply for an IP. This process is referred to as permit recall, and the practice of recall allows a permit applicant the opportunity to potentially receive approval for a project following the more thorough review that occurs for IPs. A recall determination must be issued to the applicant in writing, and the Department may recall a GP under the following circumstances:

- The proposed activity is not authorized under a general permit

- The Department determines that site-specific conditions require restrictions on the activity to prevent significant adverse impacts to the public rights and interest, environmental pollution as defined in Wisconsin Administrative Code 299.01(4), and material injury to the riparian rights of any riparian owner.

**Individual Permits**

Unlike general permits, individual permits reviews do not have design, construction, and location specifications. As such, IP reviews are more rigorous and often involve site visits. There are similarities between GP and IP reviews; however, the IP process carries two key differences—a public notice is required and Department staff is required to visit the site to observe navigation patterns, habitat, and other site features.

**Reviewing Individual Permits**
Figure 3 shows a graphical flow chart representation of the following steps:

- Following receipt of a permit application from intake, the WMS has 30 days\textsuperscript{13} to determine whether the information provided is sufficient to issue a permit decision and conduct an Environmental Assessment (EA), if applicable. Note, if the Department determines that an Environmental Assessment, as defined in NR 150.02 (11), is needed, the processing time limits are increased by 60 working days.

- If the WMS determines that a proposed activity is exempt, the WMS may complete an EDR, send it to the Central Office for processing, and notify the applicant.

- If the WMS determines that a proposed activity is eligible for a General Permit, the WMS may notify the applicant and proceed with the GP process.

- If the proposed activity needs an IP and the available information is sufficient for completing the permit review, the Department is to notify the applicant in writing within the 30 day period (Note that this notification is not a Class I notice). The date this notification is sent to the applicant is called the Date of Closure. If the available technical information is insufficient to conduct the review, the WMS may make one request to the applicant for additional information within this initial 30-day window.

- A request to an applicant for additional information does not initiate a new 30-day review period; rather, the review period will pause until the necessary information is received. After receiving all requested information, the Department has 10 days to determine if the application is complete and to notify the applicant of that fact. The date this notification is sent to the applicant is called the Date of Closure.

- If the application is complete and notification of Date of Closure sent, the Department has 15 days from the Date of Closure to issue a formal Notice of Pending Application (NPA). This NPA should be published as a Class I Notice.

- The Department may hold a public hearing if one is requested or if the Department determines there is significant public interest in a hearing (NR 310.15) within 20 days after the issuance of the Notice of Pending Application.

- Within 15 days of a Department decision to hold a hearing or the receipt of a public request to hold a hearing, DNR must provide Notice of Public Informational Hearing. This Notice should be published as a Class I Notice. The hearing must be held within 30 days of the date the Notice of Public Informational Hearing was published.

\textsuperscript{13} This is the same 30 days that intake has to review for completeness, decide whether an application is complete and notify the applicant if additional info is needed. So both intake and an initial WMS review must be complete within 30 days.
If there is a hearing, the public comment period ends 10 days after the date of the hearing. If there is no hearing, the public comment periods 30 days following the Notice of Pending Application (30.208 (4)). Anyone may submit a comment, and the Department is to consider all comments in formulating a decision.

If the intake screening shows the potential presence of a species on the Natural Heritage Inventory Working List, the WMS must notify the applicant about the need for an incidental take permit or the need to revise plans to avoid the species. The WMS will conduct an Environmental Assessment as necessary, which may require additional information from the applicant. Identification of a species on the NHI Working List causes the application to become incomplete, and the review clock stops until the issue is resolved.

For potential archaeological or historic impacts, the application review clock does not stop, and the WMS must contact the Department’s archaeologist or cultural resources specialist. The archaeologist/cultural resources specialist has 30 days to make a determination or to request an extension of time, which is not to exceed an additional 30 days (Chapter 44.40 (2)(b)).

If archaeological or historical impacts are uncovered, the WMS can add conditions to the individual permit to avoid or mitigate the impacts, which in turn allows the permit review process to continue.

When an applicant submits a permit application that will not be approved but could be approved if modified, the WMS may contact the applicant to recommend that the project be modified in order to gain approval. This is an acceptable form of technical assistance, and if used, the WMS must contact the applicant prior to issuing the notice of completeness and publishing the public notice. Permit decisions must still be issued within the established statutory timeframes, regardless of the suitability of the application.

When making permit decisions, staff should use as many tools as are necessary to issue an accurate determination (including the use of computer tools, summarized later in this chapter, and engaging in discussions with relevant Department staff or other experts).

Chapter 30.28(2r) allows an applicant to request expedited permit review. The Department should verify whether it is able to comply with the request, and if expedited review is possible, the Department should notify the applicant and can charge a supplemental fee for this service.

Generating a Individual Permit Decision
If an Public Informational Hearing was held, the decision for an Individual Permit must occur within 20 days from the end of the public comment period (Note: The Public Comment period ends 10 days after the Public Informational Hearing). Section 30.208(3) Wis. Stats. allows for this 20 day ‘decision’ time frame may be extended one time for any number of days up to 30 days if the criteria in ss. 30.208(3)(eg) are met. This criteria includes adverse weather that prevents on-site inspections.

If a Public Informational Hearing was not held, the decision for an Individual Permit must occur within 30 days from the end of the public comment period (Note: the Public Comment period ends 30 days after the date of the Notice of Pending Application). Section 30.208(3) Wis. Stats. allows for this 30 day ‘decision’ time frame may be extended one time for any number of days up to 30 days if the criteria in ss. 30.208(3)(eg) are met. This criteria includes adverse weather that prevents on-site inspections.

If an applicant receives no decision from the Department within the specified time periods the activity is considered authorized by the individual permit (i.e. presumptive approval14). The applicant could then proceed with the project on the basis of presumptive approval as long as the project is carried out in compliance with all applicable IP standards.

If the WMS determines that an IP application meets GP requirements, the WMS should process the proposal as a GP. It is not necessary for the applicant to resubmit the application on the GP form.

After the Individual Permit Decision

Applicants are legally bound to follow the project plan approved by the permit, as well as the IP conditions for the applicable activity. Failure to follow the conditions of the permit will result in a violation, and the action will be subject to enforcement proceedings. The WMS can attach a copy of the checklist that lists the standards and conditions for the particular activity to the approved permit so that this information is clear to the applicant.

Chapter 30.2095 of the Wisconsin Statutes states that all permits are valid for three years from the date of issue unless specified otherwise. The Department shall grant an extension of up to five additional years if the permit holder submits to the Department a written request for an extension prior to the expiration date of the permit. The permit holder may not begin or continue construction after the original permit expiration date unless an extension is granted by the Department in writing.

When a permit extension is requested while a permit is still valid, no new fee is required. If the permit expires before an extension is requested, the applicant must

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14 Section 30.208(3)(f) Wisconsin statutes
apply for a new permit, which requires a new permit fee. For convenience, the applicant may submit their previously approved permit application, but the applicant should be notified that permit approval is not guaranteed, as conditions may have changed since the time of the original submittal or additional review may demonstrate unacceptable environmental impacts.

- If an applicant requests modifications to an approved permit that require additional review, the Department may ask for a new application and fee to be submitted. Refunds of standard fees are made only if the applicant withdraws their application and requests a refund before the Department issues a Notice of Complete Application.

- When a property changes hands, any approved permits stay with the property, and the new owner must follow approved plans if they wish to pursue the same project. To track changes in ownership, the WMS should note the new property owner in the permit database. Note that some permits are required to undergo a formal transfer with a change in ownership (e.g. irrigation permits and dam transfers).

Public Notice and Informational Hearings

Individual permits are unique in that they require the opportunity for public involvement. When a WMS determines that an IP application is complete, a public notice must be issued. The notice should be provided to local newspapers of record and neighboring property owners, and the notice opens a 30-day public comment period. During this time, anyone can provide comments on a proposed project, and the Department must consider these comments when making a permit determination.

If requested, the Department may hold an informational hearing, which is an open meeting through which the Department provides information about a proposed project and allows the public to ask questions and provide comments. Informational hearings can occur only when requested during the public comment period. Anyone can request an informational hearing, and the WMS must hold a hearing within 30 days after providing the Notice of Public Hearing.

The Wisconsin Administrative Code, section 310.16(5)(b), states that informational hearings shall be conducted by a designee of the Department Secretary. In practice, the WMS assigned to the particular proposal conducts informational hearings, although there may be instances where other Department staff provides assistance (e.g. fisheries biologist, dam engineer, etc.)

All comments received during or following an informational hearing, and any other comments received during the public comment period, must be retained as part of the permit file. While not required by rule, a summary of substantive comments should be included in the “findings of fact” section of the permit decision.
Obtaining Resource Manager Input

In reaching a permit decision, the WMS often needs to consult with a variety of parties to better understand the potential impacts of the proposed activity. When issuing a permit denial on the basis of resource impacts, it is especially important for the WMS to obtain documentation of the impacts from a resource manager (e.g. conservation wardens, wildlife managers, water quality specialists, fisheries managers, water managers, solid waste specialists, etc.). Documentation obtained should be supported by on-the-ground conditions or observations and in sufficient detail to support the decision if the denial is contested.

By providing the following pieces of information, the WMS can help to ensure the receipt of information from a resource manager in a timely way.

- Type of activity
- Address of activity: include vicinity map
- County
- Waterway
- Project description: as applicable, provide a summary of types and volume of material placed/removed, special equipment, erosion or stormwater control measures, etc.
- Resource considerations: sensitive area, wetlands, NHI hit, outstanding/exceptional resource waters, etc.
- Local zoning issues
- Potential effects of project on public rights and interests

In addition to providing the pieces of information listed above, posing the following questions to resource managers when soliciting their opinion will facilitate the receipt of sufficiently detailed information regarding resource impacts.

- What resources exist in the project area?
- What evidence supports the presence of any identified resources? (e.g. direct observation, professional judgment, formal survey or study; provide citations as appropriate)
- What is/are the potential impact(s) to the identified resources by the proposed project?
- What is/are the potential impact(s) to navigation or other public rights by the proposed project?
- Can potential impact(s) be directly attributed to the proposed project? If yes, explain.
- Should the project application be denied on the basis of the potential impacts, or can certain permit conditions mitigate the impacts in a way to allow the project to proceed?

Exemption Determinations

Basic procedures for processing exemption determination requests are detailed in Chapter NR 310, subchapter II, of the Wisconsin Administrative Code. This chapter allows the public to request confirmation of whether a project is exempt from permitting requirements by submitting a one-page exemption determination request to the Department. An applicant must submit the exemption determination request (EDR – Form 3500-107) at least 20 days prior to
commencing the proposed activity, and the Department must notify the applicant within 15
days of receiving the application whether the activity is exempt or whether a permit is required.

All exemption determination requests (EDRs) are reviewed by Central Office staff in Madison,
who determine whether EDRs are complete and enter EDRs into the permit database. If a field
office receives an EDR, staff should forward the application to the Central Office for processing.
For incomplete EDRs, the applicant is notified of the information missing and given the
opportunity to resubmit a complete EDR. For a complete EDR, the Department will determine
whether the proposed activity meets the exemption requirements of Chapter 30, the Wisconsin
Administrative Code, and any other applicable statutes or administrative rules.

Determining whether an activity is exempt may require a site inspection (information gathered
from previous site inspections is acceptable for this purpose). If staff determines the activity is
not exempt, the Department must notify the applicant that a GP or IP is needed. When an EDR
meets the exemption criteria outlined in Chapter 30, a written decision may be issued to the
applicant. If no determination is made within 15 days of the date of receipt or the applicant is
not notified of the result of the EDR review, the EDR is presumptively approved.

F. Post-Decision Topics

Permit Appeals

Permit applicants, as well as any other party with an interest in a proposed activity, can issue an
appeal to a Departmental permit decision (only applies to individual permits). Per Wisconsin
Statutes, appeals can either be in the form of a contested case hearing or a judicial review.
Contested cases are heard by an administrative law judge and are less formal than judicial
review. In a contested case hearing (discussed in Chapter 30.209 of the Wisconsin Statutes), an
applicant is responsible for demonstrating that a project does not generate significant adverse
impacts to the environment. A contested case may arise under any one of the following
scenarios:

1. an applicant or other interested party appeals a decision issued by the Department,
2. the Department seeks to enforce a violation (typically occurs for highly technical or
   complex cases or cases that for other reasons do not go through local court), or
3. a party within the Department objects to a permit decision and wishes to appeal.

As an alternative to a contested case hearing, or following a contested case, an applicant may
request judicial review of the decision. Judicial review is much more of a formal process than a
contested case hearing and involves an applicant filing a petition with a circuit court, in which
the Department is named as the respondent. The applicant must file a petition within 30 days
of the Department’s decision and shall follow the other requirements of Chapter 227.53 of the
Wisconsin Administrative Code.

The appeal process allows applicants to voice concerns with permit decisions and gives
applicants an opportunity to present additional information that may be material to a permit
decision. If an applicant indicates their intent to appeal, the Department will work with the applicant to seek modification of the proposal or find another avenue to achieve resolution. When a third party seeks to contest a project, the Department also works to bring the parties together to clarify the dispute and attempt to achieve resolution outside of the appeal process.

For an applicant who is appealing a denied permit, the provision of sufficient information by the applicant prior to a hearing or review can result in the Department rescinding the permit denial and issuing an approval or conditional approval. Regardless of whether the denial can be reversed, the WMS should strive to obtain and compile complete information about the case, which will allow contested cases to be reviewed as quickly and efficiently as possible.

For appeals that proceed to hearing or judicial review, it is the responsibility of the WMS involved with the permit to provide comprehensive permit information to the Waterway Protection Section Chief and the Department’s Legal Counsel. The required information is outlined in a Department memorandum (provided as Appendix 1 to this document) and includes background and facts about the permit application, the rationale behind the permit decision, a chronology of permit activity, and all other documentation that may be needed to provide a comprehensive review of the case. The WMS may be required to visit the project site, as well as solicit input from resource managers regarding potential resource impacts.

There has often been the question of, can the same riparian owner who went through the appeals process and received a final decision that was not in their favor just submit a new application for the same project go through the process again? Nothing in our current rules (chs. NR 300, 301, 305, and 310 expressly prohibits this by rule. However, when this has happened we simply deny the application based on a judicial concept called "estoppel by record." Estoppel by record is a doctrine similar to claim preclusion under which a party is prevented from litigating what was litigated or might have been litigated in another proceeding; but it is the record of the prior proceeding, not the judgment, that is the bar to the second proceeding. Be mindful that when faced with a situation to ascertain when the doctrine can and cannot be applied do not hesitate to contact the Program attorney.

**Revoking a Permit**
Under certain circumstances, the Department may be required to revoke a permit. Standard permit conditions specify that the Department may elect to revoke a permit if the project is not completed according to the terms of the permit or if the Department subsequently determines the activity is detrimental to the public interest. Similarly, a contested case decision may specify that a permit be revoked to protect the public interest.

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Compliance Monitoring

The Department conducts annual permit compliance inspections to ensure waterway regulations are being followed and to provide a measure of performance for the waterway regulatory program. The compliance monitoring program was established by the Bureau of Watershed Management, and the monitoring protocol involves local WMS staff performing inspections and compiling data on a set of randomly-selected permits issued in a given year. Monitoring also targets specific activities at a statewide scale, and in so doing, the compliance monitoring program sheds light on program successes and provides data to indicate whether programmatic adjustments are needed.

Enforcement

Chapter 30 of the Wisconsin Statutes outlines the activities that are regulated to protect the public interest in Wisconsin’s waterways. For each of these activities, the Department possesses enforcement authority, and this authority may be exercised when a landowner starts or completes a project without obtaining the appropriate permits or when an applicant violates the terms and conditions of an approved permit. Enforcement is further explained in the Wisconsin Statutes and in various sections of Chapter 30.

Regulatory non-compliance is uncovered in a variety of ways, ranging from citizen complaints to compliance monitoring site visits to conservation warden patrols. The actions taken to enforce non-compliance may include monetary penalties and mandatory abatement or restoration, as well as after-the-fact permits for unpermitted activities. The manner in which enforcement actions are taken against a violator of Wisconsin’s waterway regulations is case-by-case and may involve a variety of staff depending on the situation.

Handbook Chapter 50 outlines Enforcement policies in greater detail.

E. Waterway and Wetland Database

Chapter 30.285 of the Wisconsin Statutes requires the Department to keep records of all permitted activities and exemptions and specifies the minimum information to be maintained. The waterway and wetland database was created to fulfill this statutory requirement, as well as to provide an organized and systematic means to track permit activities.

At a minimum, the following fields should be populated for every record in the database:

- Docket number – automatically generated when a permit activity is entered
- First & last name of the applicant
- Full address of the applicant
- Activity type
- Permit type (GP, IP, EXE, ENF, or INF)
- County where the proposed project is located
- QQ, Q, section, township, range
• Waterway affected by the project
• Application received date
• WMS conducting the review

In addition to exemption determinations, GPs, and IPs, enforcement actions and navigability and ordinary high water mark (OHWM) determinations are tracked in the database. Furthermore, entry of the following actions into the database is not required but is encouraged:

  a. Jurisdictional determinations other than navigability or OHWM (e.g., farm drainage channels, wetland identification, etc.)
  b. Shoreland assistance
  c. Floodplain assistance
  d. Any other activities as determined by the Bureau Director or Watershed Program Leader

**Data Entry and Tracking**

Each database record has a unique docket number, which is used to track activities. In general, each activity or landscape alteration is assigned a separate docket number, although there are exceptions. As a result, a single application may require multiple docket numbers—and multiple database entries—due to the nature of the project. It may also be necessary to modify a project’s number of dockets during the application review process due to modifications resulting in additional or fewer landscape alterations.

Department staff should enter informal actions other than the required navigability and OHWM determinations into the database where activity names for such actions are available in the database. The Central Office maintains an up-to-date list of informal actions in the database and creates new activity names as conditions change. Field staff is encouraged to relay to the Central Office suggestions for new activity names based on increasingly common activities.

The database guidance document\(^{16}\) (accessed through the database)\(^{17}\) should be referenced for specific details regarding data entry and tracking. This document is a “living” document and is continually updated as changes arise with database structure, functions, or use.

**Data Quality**

Periodic quality assurance/quality control of database records is performed by staff at the Central Office, under the direction of the Statewide Policy Coordinator. Quality control is driven partly by the need to issue annual reports on permit activities, and as a result, the primary focus is on identifying and correcting missing information (specifically decisions and decision dates) and obvious data entry errors.

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\(^{16}\) file://central/watershed/WaterwayWetlandPermitSystem/DatabaseGuidance

\(^{17}\) http://intranet.dnr.state.wi.us/waterwaypermit/welcome.aspx
Supplemental Information: Computer-Based Research Tools

The volume of information available on the internet that can be of value to environmental protection and management efforts is extraordinary, and internet tools can prove to be a tremendously valuable resource in support of permit processing.

Government agencies and academic institutions typically maintain extensive data collections in a variety of formats, and much of this data is publicly available and easily accessed through online applications. Such tools allow the user to collect and organize numerous data sources for research purposes, and some tools allow users to display data spatially. In some cases these online tools access “real time” data, ensuring the most current information is distributed.

The challenge with internet-based data tools is determining which of the available sources are most useful. The remainder of this section presents a list of several internet-based research tools that may be helpful when reviewing permit applications (ordered alphabetically).

Board of Commissioners of Public Lands (BCPL)
The BCPL houses the original government field notes and plat maps of the public land survey of Wisconsin dating back to the 1800s. These maps are a valuable resource for original land survey information, as well as for understanding Wisconsin's landscape history.
http://digicoll.library.wisc.edu/SurveyNotes/

Department of Agriculture, Trade, and Consumer Protection Drainage District Mapping
This web-based mapping application allows users to locate a drainage district and its approximate boundaries and status or get more detailed information about a district or a county drainage board.
http://datcpGIS.wi.gov/DrainageDistricts/

DNR Lake Survey Maps
The DNR lake survey maps are 8 ½ x 11 maps and are available for the majority of named lakes in the state. The maps show inlets, outlets, vegetation types and shoreline development.

DNR Surface Water Data Viewer
This Internet mapping site provides water resources information throughout Wisconsin. The viewer can display a wide variety of features, including designated waters, wetlands, dams, and floodplains. Surface Water Data Viewer maps are especially useful in determining the relationship between a proposed project and a lake or stream that carries a special designation.
General Link
http://dnr.wi.gov/org/water/data_viewer.htm
Internal DNR Site link
http://dnrintranetmaps.enterprise.wistate.us/imf/imf.jsp?site=watershed
External DNR Site link
http://dnrmaps.wisconsin.gov/imf/imf.jsp?site=SurfaceWaterViewer.deswaters
DNR WebView
This interactive map viewer allows users to access and display a subset of the Department’s Geographic Information System (GIS) data. Features include creating customized maps of a given area, viewing digital aerial photos for any location in Wisconsin, and performing basic spatial analyses.

http://dnr.wi.gov/maps/gis/appwebview.html

Digital Watershed
Hosted by Michigan State University, this centralized information repository and computing center covers all watersheds within the United States. The database contains a variety of data layers and allows users to conduct a variety of analyses and simulations involving land use changes and corresponding hydrologic impact.

http://www.iwr.msu.edu/dw

EnviroMapper for Water
The Environmental Protection Agency’s (EPA) EnviroMapper site allows you to view geospatial data, including the National Hydrography Dataset. The tool dynamically displays water quality and other environmental information about bodies of water throughout the United States.

http://www.epa.gov/waters/enviromapper/

Great Lakes Indian Fish and Wildlife Commission Map Viewer
This Internet mapping site displays treaty resources, known aquatic and terrestrial invasive species, and other resource management information for Minnesota, Wisconsin, and Michigan.

http://maps.glifwc.org/

Long-Term Hydrologic Impact Assessment
This modeling tool estimates changes in recharge, runoff, and nonpoint source pollution resulting from past or proposed development. It can be used to evaluate potential effects of land use change and to identify the best location of a particular land use.

http://www.ecn.purdue.edu/runoff/lthianew/

My Environment
My Environment is an EPA application that is designed to provide a cross-section of environmental information based on the user’s location. Key categories of information available include air, land, water, community, and environmental health.

http://www.epa.gov/myenvironment/

National Wetlands Inventory Wetland Mapper
This U.S. Fish and Wildlife Service application hosts data and metadata from the Wetlands Master Geodatabase and displays geospatially-referenced information on the status, extent, characteristics, and functions of wetland, riparian, deepwater, and related aquatic habitats in priority areas.

http://www.fws.gov/wetlands/Data/Mapper.html
Natural Heritage Inventory Database
The “NHI” database provides a statewide inventory of known locations and conditions of rare species (including species listed as endangered or threatened), high-quality or rare natural communities, and unique and significant natural features.

http://dnrintranetmaps.enterprise.wistate.us/nhiportal/mts_login.asp

Natural Resources Conservation Service (NRCS) Web Soil Survey
Web Soil Survey provides soil data and information produced by the National Cooperative Soil Survey, including soil maps and data for more than 95 percent of the nation’s counties.

http://websoilsurvey.nrcs.usda.gov/app/

Surf Your Watershed
Hosted by the EPA, this tool contains sets of environmental data that can be queried to provide environmental profiles for pre-selected watersheds.

http://www.epa.gov/surf/

Soils Data Mart
The Natural Resources Conservation Service (NRCS) provides tabular and spatial soils data through this site. Options include downloading soil surveys and generating survey reports.

http://soildatamart.nrcs.usda.gov/

US Topo
This site provides digital topographic maps from the United States Geological Survey, arranged in the traditional 7.5 minute quadrangle format and available for free.

http://nationalmap.gov/ustopo/index.html

University of Wisconsin Robinson Map Library
The Robinson Map Library maintains a comprehensive collection of maps, including maps of topography, soils, geology, and land use/land cover. The library also provides an online aerial photograph collection.

http://www.geography.wisc.edu/maplib/index.html

Water Erosion Prediction Project (WEPP)
This modeling tool predicts soil erosion using climate, management, soil, and topography data.

http://milford.nserl.purdue.edu/

Watershed Assessment, Tracking & Environmental Results (WATERS)
This integrated information system provides water quality information. Use it to download data sets, such as 303(d) listed impaired waters, or to perform nationwide analyses across states.

http://www.epa.gov/waters

Wisconsin Coastal Image Server
This site provides geographic data about Wisconsin’s Lake Michigan and Lake Superior coasts and allows for interactively selecting data layers (including historic digital orthophotos dating back to 1956) and specific areas of interest at a variety of zoom levels.
Wisconsin EcoAtlas
This database is a collection of information about past and current research and monitoring activities relevant to Wisconsin's natural resources.
http://ecoatlas.wiatri.net/ecoatlas/

Wisconsin Historical and Archaeological Site Maps
The Department’s Bureau of Facilities and Lands maintains historical and archaeological site maps at the county scale.
http://intranet/int/land/facilities/facilities/arch.html

Wisconsin Historic Preservation Database
The Wisconsin Historical Society collects and organizes information regarding historic structures, archaeological sites and burials located within the state. The Division of Historic Preservation is the official state clearinghouse and repository for records pertaining to all such properties, and this database allows users to search the most up-to-date versions of the Archaeological Sites Inventory, Architectural History Inventory, and the Bibliography of Archaeological Reports.
http://www.wisconsinhistory.org/hp/whpd/

Wisconsin Land Economic Inventory Maps (Bordner Survey)
The Bordner Survey are 8 ½ x 11 maps showing land cover and waterways as they existed in the 1930s and 1940s.
http://digicoll.library.wisc.edu/EcoNatRes/subcollections/WILandInvAbout.shtml
Note: These maps are not available for Forest, Lincoln, Manitowoc, Menominee, Milwaukee and Sheboygan Counties. All DNR service centers should have a set of these for each of their counties.

Wisconsin State Cartographer’s Office
http://www.sco.wisc.edu/apcat/apcat.php

WisconsinView
Data formerly maintained by the University of Wisconsin’s Environmental Remote Sensing Center is now available through WisconsinView, which provides aerial photography and satellite imagery of Wisconsin through this website.
http://www.wisconsinview.org/

Wisconsin Water Science Center
This clearinghouse provides real-time and historic data on surface water, groundwater, and water quality for thousands of sites throughout Wisconsin.
http://waterdata.usgs.gov/wi/nwis/nwis
**Figure 1: Exemption Determination Request Process Steps**

**EXEMPTION DETERMINATION REVIEW TIMELINE**

Applicant submits an Exemption Determination Request (EDR) to DNR Central Office at least **20 DAYS** prior to commencing the activity.

Docket number assigned to EDR

Is the EDR complete?

**YES**

Decision issued within **15 days** of receipt of EDR.

**NO**

Activity is not eligible for exemption as submitted. Applicant notified within 15 days and may re-submit a complete EDR.

All days are calendar days. An EDR is automatically considered ineligible if incomplete, but the applicant may re-submit a complete EDR for consideration (see NR 310 Subchapter II, Wis. Adm. Code). If DNR does not issue a decision within 15 days, the request is presumptively approved. All exemption standards must continue to be met.

*Mail EDRs to:
DNR, Bureau of Watershed Management
ATTN: Martye Griffin – WT/3
P. O. Box 7921
Madison, WI 53707-7921

Or Fax to:
(608) 266-2244

This document is for informational purposes only. See Chapter 30 Wis. Stats. and NR 310 Wis. Adm. Code for details.

August 2005 (rev. 2011)
Figure 2: General Permit Process Steps (Last Rev. November 2013)

**GENERAL PERMIT Coverage Process and Timelines**

1. GP application received by DNR intake and logged into database. 30-day review period begins.

2. GP Application Received by WMS
   - Is the application complete?
     - Yes: *DNR completes review to determine if project meets GP requirements and conditions. Does application meet GP requirements and conditions?*
     - No: DNR may make one request for additional information to complete the application. 30-day clock pauses.

3. Applicant submits requested information. 30-day clock resumes.

4. *DNR completes review to determine if project meets GP requirements and conditions. Does application meet GP requirements and conditions?*
   - Yes: DNR issues Coverage letter packet within 30 days after application received.
   - No: DNR notifies applicant that an Individual Permit is required, within 30 days after application received, not counting time from request for add’l info to receipt of add’l info.

5. DNR notifies applicant that an Individual Permit is required, within 30 days after application received, not counting time from request for add’l info to receipt of add’l info.

*If the department determines that an activity is not eligible for a general permit, the department shall notify the applicant in writing that the applicant may revise the project so that the activity is eligible for a general permit, withdraw the application or apply for an individual permit. In its notification, the department shall state why the project is ineligible for a general permit. The statement shall, where applicable, describe public rights features at the site or conditions specific to the site that require restrictions different than the general permit conditions in order to prevent significant adverse impacts to public rights and interests, environmental pollution as defined in s. 299.01 (4), Stats., or material injury to the riparian rights of any riparian owner.

**PERMIT AUTOMATICALLY APPROVED IF DNR DOES NOT MEET DECISION DEADLINE**
**Waterway INDIVIDUAL PERMIT Process and Timelines**

- **Application received.**
  - **30-day** review period begins.
  - Is the application complete?

  - **Yes:**
    - DNR informs the applicant in writing that application is complete. The earlier of the notification date or the end of the 30-day review period is the "date of closure." *(THIS NOTIFICATION IS NOT A CLASS 1 NOTICE)*

  - **No:**
    - DNR may make one request for additional information, which must be made within the 30-day review period. Clock pauses while DNR awaits information.
    - **Was ALL requested info received?**
      - **Yes:**
        - Within **15 days** after Date of Closure, NPA (and Notice of Public Hearing, if requested with application) WILL be published as a Class 1 notice, mailed to any interested party (on request) and any others determined by DNR, AND posted on DNR website.
      - **No:**
        - Did application contain a request for a hearing?
          - **Yes:**
            - DNR issues Notice of Pending Application (NPA) within **15 days** after Date of Closure. NPA (and Notice of Public Hearing, if requested with application) WILL be published as a Class 1 notice, mailed to any interested party (on request) and any others determined by DNR, AND posted on DNR website.
          - **No:**
            - Include Notice of Public Informational Hearing with Notice of Pending Application (NPA). Must be published as a Class 1 notice like the NPA.

  - **Did application contain a request for a hearing?**
    - **Yes:**
      - Within **20 days** after Date of NPA [the date published on web]
        - Did DNR decide to hold a Public Informational Hearing, or was request for hearing submitted to DNR?
          - **Yes:**
            - Within **15 days** of the decision to hold a hearing (or the receipt of a request), DNR must provide Notice of Public Informational Hearing, which must be published like the NPA (on the DNR website, Class 1 notice, and mailed to interested parties).
          - **No:**
            - DNR may remind applicant of additional info DNR requested but has not yet received. Clock remains paused.

    - **No:**
      - DNR may remind applicant of additional info DNR requested but has not yet received. Clock remains paused.
Within **30 days** after providing Notice of Public Informational Hearing, DNR must hold hearing. “Provided Notice” date is the website publication date.

No public hearing

Public comment period ends **10 days** after public informational hearing

DNR issues decision within **20 days** after public comment period ends, or PERMIT IS AUTOMATICALLY APPROVED.

Public comment period ends **30 days** after Date of NPA [the date published on web]

DNR issues decision within **30 days** after public comment period ends, or PERMIT IS AUTOMATICALLY APPROVED.

** For these boxes the 20 or 30 day “decision” time frame can be extended ONE time for any number of days NOT to exceed 30 days if:
A) mutual agreement
B) Department decision (if adverse weather conditions prevent the department from conducting an accurate on-site inspection during the 20 or 30 day time period).
DATE: December 13, 2016

FILE REF: Docket #

TO: Liesa Lehmann Kerler – WT/3

FROM:

SUBJECT: File Referral for Contested Case Hearing

Enclosed is a Hearing Request form and supporting documentation for the following applicant:

Name:  
Address:  

The contact person for additional information regarding this hearing request is:

Name:  
DNR Office:  
Phone:  

Recommended Department position: ☐ As interest may appear  ☐ In opposition

Approved by:

_____________________________  
Click here and type Supervisor Name, Basin Supervisor  
Date: ____________

_____________________________  
Click here and type Water Leader Name, Water Leader  
Date: ____________

cc:  Click here and type CC's
HEARING REQUEST FORM

I. Background and Fact Situation

Applicant:  
Docket #:  
Waterway:  
Location:  
Town/City/Village of:  
County:  
Public Interest functions and uses of waterway or wetland:  
Public Interest functions and uses at project site:  
Proposed activity:  
Pertinent background information including any previous actions on the proposal:  

II. Decision Rationale and Summary of Evidence

Statutory authority:  
Factors supporting jurisdiction:  
Case Type (check all that apply):  
Public objection  
Department objection  
Enforcement of violation  
Appeal of Department decision  
Potential Public Interest impacts:  
Other issues to be decided at hearing:  
Applicant or objectors perspective as we understand it:  
Any other involved parties and their interest:  
Appendix 1: Hearing Referral Memorandum

Click here and type

III. Chronology

Date Application Received:  
Date Application Complete:  
Public Notice Required?  
Date of Notice Publication:  
NR 150 action type:  
Applicable section:  
Decision:  
Decision Date:  

IV. Documents enclosed (check all that apply):

☐ Application
☐ Investigation report
☐ Photographs
☐ Proof of notice of publication
☐ Letters of objection
  Assessment of objections received:
  
  Describe efforts to mitigate any objections:

☐ Applicant’s alternative analysis for wetland impacts
  Department assessment of alternative analysis:

☐ Department evaluation of wetland functional values
☐ Hydrologic and hydraulic analysis
  Department assessment of impacts on flood flow capacity:

☐ Environmental Assessment
☐ Other pertinent Correspondence (describe):

Click here and type
Appendix 1: Hearing Referral Memorandum

☐ Other Exhibits (describe):
Click here and type

V. Witness and Hearing Information

Estimated number of days needed for hearing: Click here and type
Special requirements for hearing: Click here and type

List of recommended Department witnesses, including phone numbers, testimony topics and dates unavailable the next three months:
Click here and type
CORRESPONDENCE/MEMORANDUM

DATE: July 1, 2011
(Updates and replaces November 2009 Memo)

TO: Water Management Specialists
   Permit Intake Specialists
   Regional Watershed Supervisors
   Waterway Protection Section Staff

FROM: Waterways Policy and Management Team

SUBJECT: UPDATED Implementation Plan - “Reduced General Permit Process” Workload Reduction

On September 8, 2009, Todd Ambs directed all programs in the Water Division to begin implementation of several work reduction efforts, in order to cope with budget and staffing shortfalls related to the economic downturn. Specifically, the workload reduction memo stated:

Applications for general permits will be received at intake locations. Intake specialists will triage general permits applications using established criteria and only forward those GP applications meeting the criteria to WMS staff for further review. GP requests for activities where audits have shown high compliance and low environmental risk will not be forwarded. Savings will be realized through reduced WMS time investment in review of GP applications. This item can be linked with consolidated permit intake (below) for greater efficiency.

An initial implementation memo for General Permit Triage was issued in November 2009. Due to ongoing and increased vacancies, this memo provides updated guidance for changes in work effort related to processing General Permits for the Waterway and Wetland permit programs.

Two actions will be implemented to meet this workload reduction measure.

1. General permits with high compliance and low environmental risk will be processed by Permit Intake Specialists. The General Permits listed in Table 1, Column A, will be processed by the Permit Intake Specialist. For these applications, the Permit Intake Specialist will issue an acknowledgement letter which notifies the applicant that they may proceed with their project, based upon their self-certification that the project meets eligibility criteria and will meet all permit conditions. See attached flow chart for more detail. The file will be forwarded to the local WMS for filing and future reference.

2. All other General Permit applications will be forwarded to the local WMS for review after intake is complete. WMS review of General Permit applications should be completed as a desktop review. Site inspections should be selective and rare.

NOTE: Table 1 will be reviewed and updated on a regular basis to ensure workload reduction and environmental protection.

cc: Susan Sylvester – WT/3
    Regional Water Leaders
Table 1  
General Permit Triage

<table>
<thead>
<tr>
<th>General Permit Activity</th>
<th>Column A GP's not requiring WMS Review</th>
<th>Column B GP's requiring WMS Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological shore erosion control - lakes</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Biotratification - streams</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Bridge – clear span</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Culvert w/engineering</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Culvert w/o engineering</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Dredging – motor vehicle invasive species management</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Dredging – motor vehicle nuisance deposit</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Dredging – jetting aquatic plants</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Dredging – drainage district maintenance</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Dredging – less than 25 yards - streams</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Dredging – manual</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Dredging – previously dredged area</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Dredging – utility crossings</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Dry fire hydrant</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Fish habitat structure - government</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Fish habitat structure - nongovernment</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Ford</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Grading 1 acre or more</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Grading &lt; 1 acre</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Intake / outfall</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Integrated bank treatment - streams - government</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Integrated bank treatment - streams - nongovernment</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pea gravel blanket</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pilings</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pond – landscape</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pond – storm water</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pond – wildlife - government</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pond – wildlife - nongovernment</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Public boat ramp</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Replace seawall/riprap w/ biotratification - streams</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Replace seawall/riprap w/ integrated bank – streams</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Riprap – repair</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Riprap – replacement</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Riprap/vegetated armoring – lakes</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Seawall – replace with riprap/vegetation</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Seawall replacement</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Temporary instream crossings</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Weed rake</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Wildlife habitat structure</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

*Date of Last Table Revision: July 1, 2011*
Appendix 3.
PERMIT EXPIRATIONS

s. 30.20 (2) Permit Expiration for Dredging Contracts
Contracts for the removal and lease or sale of any material from the bed of any navigable lake or any outlying waters may not run for more than 5 years. The Department may allow one extension of a contract which shall be for the same period as the original contract.

Contracts for the removal and lease or sale of any mineral, ore or other material from beneath the bed of a navigable water that the state may own may not run for more than 75 years.

Individual permits for dredging can be issued for a period of up to 10 years. The Department may allow one extension for the same period of time as the original permit.

Barge Fleeting Permits (NR 327.07 (4)), Nonmetallic mining permits (NR 340.06 (2))
Permits can be authorized for a period of not less than 5 years and no greater than 10 years. They may be renewed for succeeding periods of up to 10 years.

Time limit for General Permits Created by Rule
s. 30.206 (1r) Transitions Between Permits
Any general permit issued under this section that is valid on July 1, 2012 shall remain valid until the date upon which a statewide general permit issued under sub. (1) (a) or (am) that authorizes the same activity becomes effective.

s. 30.2095 (1) (a) Time Limit for Activities Authorized Under Ch. 30 GP Created by Rule
Except as provided in par. (b), every permit or contract issued under ss.30.01 to 30.29 for which a time limit is not provided by s. 30.20 (2) is void unless the activity or project is completed within 3 years after the permit or contract was issued.

*Note: Activities authorized under GPs created by rule can no longer be extended for an additional 2 years.

s. 30.2095 (1) (b) Time Limit for Individual Permits

s. 30.208 Ch. 30 IP and s. 281.36 (3m) Wetland IP
Three years. The department may specify a time limit of less than 3 years for an individual permit or contract issued under ss. 30.01 to 30.29. The department shall extend the time limit for an individual permit or contract issued ss. 30.01 to 30.29 for no longer than an additional 5 years if the grantee requests an extension prior to expiration of the initial time limit.
**Time Limit for Statewide General Permits**
A statewide general permit is valid for a period of 5 years.

The department may renew or modify or revoke a statewide general permit issued under par. s. 30.206 (1)(a) or (am) or s. 30.2065 or s. 281.36 (3g) (e) upon compliance with s. 30.206 (2b) and 281.36 (3g) (f) public notice requirements, 281.36 (3g) (fg) Date of Notice, 281.36 (3g) (fm) Written Comments, 281.36 (3g) (fr) Description in notice and s. 30.206 (2m) 281.36 (3g) (g) public hearing requirements.

**Time Limits for Coverage under Statewide General Permits**

**30.206 (1) (b) Chapter 30 Statewide General Permit**
An activity that the department determines is authorized by a statewide general permit remains authorized for a period of 5 years from the date of the department’s determination or until the activity is completed, whichever occurs first, regardless of whether the statewide general permit expired before the activity is completed.

**30.2065 (2) (b) Statewide Wetland Restoration General Permits**
An activity that the department determines is authorized by a statewide wetland restoration general permit remains authorized until the activity is completed.

**281.36 (3g) (h) (5) Statewide Wetland General Permits**
Authorization to proceed under a wetland general permit is valid for 5 years after the date on which the discharge is considered to be authorized or until the discharge is completed, whichever occurs first.
GUIDANCE PURPOSE AND DISCLAIMER

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance cannot be relied upon and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes, common law and administrative rules to the relevant facts.

This file is an electronic version of a chapter of the Waterway and Wetland Handbook. This document was scanned from the master handbook chapter kept at the Bureau of Fisheries and Habitat Protection central office in Madison. All effort was made to ensure this scanned electronic copy is an actual copy of the hardcopy document. Due to the electronic scanning process, there may be rare instances of typographical errors, omissions or improperly formatted pages. Please refer to the master handbook if accurate transcription is required.

The following words or phrases have been defined here because they frequently arise in the administration of water regulations. Technical terms related to specific structures or activities can be found in administrative rules and in the references provided at the end of the glossary.

"Abutment"

"Accretion" means the buildup of land either by natural or artificial forces on a beach. In a natural situation it is the deposition of water or airborne materials. In an artificial situation, it results from an act of man such as construction of a groin or breakwater.

"Adjacent" means having a common border.

"Aerator" means an apparatus used to inject air into a water body either by absorption as air rises through the water or as water falls through the air. Aerators are used to (1) increase the level of dissolved oxygen in the water, or (2) prevent ice formation (e.g. around a pier).

"Aesthetics"

"Agriculture" means the science or art of cultivating the soil, producing crops and raising livestock.

"Aggradation"

"Appurtenances"

"Aquatic Nuisance Control" means the suppression of algae, aquatic plants, bacteria and other nuisance
producing plants and organisms.

"Arable" means land that is suitable for plowing or tillage; hence, for producing crops.

"Avulsion" means a sudden cutting off of land by flood, current or change in course of a body of water, especially one separating land from one person's property and joining it to another's.

"Backfill"

"Backwater"

"Bank" means the land surface abutting the bed of any navigable waterbody which, either prior to any project or alteration of land contours or as a result of the proposed project or alteration, slopes or drains without complete interruption into the waterbody (NR 340.02(2), Wis. Adm. Code).

"Bank Stability"

"Base Flow" means that part of the streamflow that is derived from groundwater.

"Basin Approach"

"Beach" means the zone of unconsolidated material that extends waterward from the low water line to the place where there is a marked change in material or physiographic form, or to the line of permanent vegetation.

"Bed, Lake" means the bottom of a lake below the ordinary high watermark.

"Bed, Stream or River" means the bottom of a stream or river below the ordinary high watermark.

"Benchmark" means a relatively permanent object, natural or artificial, bearing a marked point whose elevation is known in reference to an adopted datum. Common examples are metal discs set in concrete, nonmovable parts of fire hydrants, marked points on curbs, and spikes placed in trees or power poles.

"Beneficial Use" means any use of surface water which is of measurable economic advantage to the user.

"Benthic Organism"

"Berm" means, 1. A nearly horizontal part of a beach or backshore formed by wave action; 2. A horizontal step in the sloping profile of an embankment dam; 3. A ledge at the bottom of a cutting or bank, as of a stream or river to catch earth that may roll down the slope, or to strengthen the bank; 4. Sometimes used to mean the same as the definition of dike, levee, or embankment.

"Biochemical Oxygen Demand (BOD)"

"Blind"

"Blowout"

"Boat Landing"

"Boat Shelter"
"Boat Slip"

"Boathouse" means a permanent structure used for the storage of watercrafts and associated materials and includes all structures which are totally enclosed, have roofs or walls, or any combination of structural parts (NR 325.03(3), Wis. Adm. Code).

"Bog"

"Bond, Reclamation"

"Boom"

"Boulder Retards"

"Breakwater" means an offshore structure protecting a shore area, harbor, anchorage, or basin from waves.

"Bridge" means any private or public structure except municipal highway bridges constructed in or over a navigable waterway to provide a walkway or roadway for pedestrians, animals or vehicles (NR 320.03(5), Wis. Adm. Code).

"Bridge, Municipal highway" means any city, town, village or county owned structure built in or over a navigable waterway for public highway purposes (NR 320.03(6), Wis. Adm. Code).

"Bridge Pier" means an intermediate support for the adjacent ends of two bridge spans.

"Brush Bundles"

"Buffer"

"Bulkhead line" means a shoreline legislatively established by a municipality under Section 30.11, Stats., and approved by the DNR.

"Bulk Sediment Analysis" means the characterization, both physically and chemically, of stream or lake sediments which is performed by using a representative sample of the entire sediment column in question.

"Buoy" means a float, especially a floating object anchored or attached to the bottom of a lake or stream to provide boating information (e.g. to mark a channel, anchor, shoal or rock) or for mooring watercraft.

"Canal"

"Chain of Title" means a test for determining whether land is riparian, holding that land bordering a lake or stream which has been under the same ownership in an uninterrupted line from the original government patent is riparian.

"Channel" means a natural or artificial waterway of perceptible extent including a bed and bank which either periodically or continuously contains water or which forms a connecting link between two bodies of water.

"Check Valve" means a valve which opens in the direction of normal flow and closes with reversal of flow and permits no leakage in a direction opposite to the direction of normal flow.

"Condemnation"
"Connect, To" means the direct physical joining of a waterway to an existing body of navigable water below the elevation of the latter's ordinary high watermark where the joining is by means of an open channel having a bed and banks.

"Contiguous" means next to or being in actual contact with.

"Contour"

"Corduroy Road" means a road built of logs or similar material laid side by side perpendicular to the direction of travel.

"Cranberry Culture"

"Creek"

"Crib" means any of various devices resembling a crate or framework in structure used in certain dam construction, pier construction or as a type of fish attractant or habitat.

"Cross-section" means a vertical section (side view) of the ground surface or of a structure at right angles to the centerline of a route survey, to the direction of stream flow lines, or to a principal axis of the structure.

"Culvert" means a drain or waterway structure built to carry water under a road, railway or embankment. A culvert usually is of regular cross-section, round, elliptical, square, etc., and built out of concrete or metal.

"Dam" means any artificial barrier together with appurtenant works, which does or may impound or divert water (NR 330.02(2), Wis. Adm. Code).

"Datum" means any level surface noted by permanent benchmarks from which elevations are measured or to which they are referred (for example, Mean Sea Level). Also called a datum plane although the surface actually parallels the earth's curvature.

"Deadmen"

"Degradation"

"Deposit" means (1) to place fill or other material on the bed of a navigable waterway; (2) the material which is placed on the bed of a navigable waterway.

"Detention Pond"

"Dewater"

"Digger Logs"

"Dike" means an embankment constructed to prevent flooding from a stream or other body of water. The term is also used to mean a structure to impound or retain water.

"Discharge"

"Ditch"
"Diversion" means the removal of water from a stream.

"Dock" means (1) a wharf or pier used for the loading or unloading of persons or materials from boats; or (2) a slip or waterway for the reception and berthing of ships.

"Dock lines"

"Downstream"

"Drawdown" means the artificial lowering of an impoundment below the normal or ordered minimum water levels.

"Dredge Spoil" means the material that is removed from the beds of waterways during a dredging operation.

"Dredging" means the removal of material from the beds of waterways.

"Dredging, Hydraulic" means the removal and transport of dredged material in a slurry (NR 347.03(12), Wis. Adm. Code).

"Dredging, Mechanical" means dredging done by other than hydraulic dredging (NR 347.03(14), Wis. Adm. Code).

"Drought"

"Duck Blind" means a blind or hide used in the hunting of waterfowl which is removed at the end of hunting hours each day.

"Easement"

"Effluent"

"Egress"

"Embankment"

"Emergency Drawdown" means an unscheduled lowering of the water in an impoundment caused by an unusual or urgent condition existing in the dam or impoundment.

"Emergency Spillway" means a secondary spillway designed to operate only during floods which exceed the designed capability of the principal spillway.

"End Section Method"

"Erosion" means the wearing away of land by the action of wind and water.

"Elutriate Test" means an analytic procedure where a water-solids mixture is agitated, then allowed to settle. Chemical analyses are performed on the liquid fraction of the mixture.

"Fauna"
"Fetch" means the distance over which waves may travel in open water resulting from wind of rather constant direction and speed.

"Fill" means material (deposit) placed on the bed of a navigable waterway.

"Financial Capability" for dam ownership, means a satisfactory demonstration of tangible wealth sufficient to operate and maintain a dam in a safe condition for a period of not less than ten years. Evidence of financial capability may include, but is not limited to bonds, irrevocable letters of credit, corporate statements, and property ownership involved with a dam.

"Fish Crib" means a device consisting of a crate or framework of wood, bundles of tires or trees, weighted with rock or other similarly dense material sufficient to cause the device to sink to the bottom of a lake and to remain in place for the purpose of attracting and providing a safe haven for fish.

"Fishery"

"Fishway"

"Flashboard" means lengths of timber, concrete or steel placed on a crest of a spillway to raise the normal water level. They may be quickly removed at time of flood either by a tripping device or by designed failure of the flashboards or their supports.

"Flood" means a general and temporary condition of partial or complete inundation of normally dry land areas caused by the overflow or rise of rivers, streams or lakes.

"Flood Flow Capacity"

"Flood Fringe" mans that portion of the floodplain outside of the floodway which is covered by flood waters during the regional flood. It is generally associated with standing water rather than with rapidly flowing water.

"Flood Gate"

"Flood, Mean Annual" means a flood expected to occur on the average once every 2.33 years.

"Floodplain" means the land which has been or may be covered by flood water during the regional flood. The floodplain includes the floodway and the flood fringe.

"Floodway" means the channel of a river or stream and those portions of the floodplain adjoining the channel required to carry and discharge the flood water or flood flows associated with the regional flood.

"Flora"

"Flow, Base" see base flow.

"Flow, Low" means the minimum stream discharge that occurs within a given time period.

"Flow, Natural Low" means the low flow that would occur without any artificial flow regulations action. (An administrative rule definition is need to add detailed meaning to the phrase, "natural low flow," as used in Section 31.34, Statutes).

"Flow, Normal" means flow that is not affected by "storm waters," drought conditions, or other unusual
contributors to or detractors from stream flow.

"Flowage" means a body of water formed by overflowing or damming of a stream or by construction of a dam at the outlet of a natural lake thereby raising the water level above its natural elevation.

"Flume" means an open channel built with earth, timber, masonry, concrete or steel, often of rectangular or U-shaped cross-section and designed for medium or high velocity flow.

"Ford" means (1) a shallow part of a body of water that may be crossed by wading or traveling on the bed of the waterbody, (2) a structure (concrete or wood) or placement of material (rock or gravel) to facilitate crossing a body of water, or (3) to cross a stream using such a place or structure.

"Freeboard" means the additional height of a structure above the design high water level intended to prevent overflow. Also, at a given time, the vertical distance between the water level and the top of the structure.

"Gabion" means a wire basket filled with rock, usually joined with other wire baskets, to provide erosion protection along a bank.

"Gage"

"Grade or Otherwise Remove" means the physical disturbance of the bank by the addition, removal or redistribution of topsoil (NR 340.02(3), Wis. Adm. Code).

"Gradient"

"Great Lakes Basin"

"Groin" means a shore protection structure built (usually perpendicular to the shoreline) to trap littoral drift or retard erosion of the shore; or to direct stream flow and scouring patterns in streams for fish management objectives.

"Groundwater"

"Half Logs"

"Harbor" means any protected water area affording a place of safety for watercraft.

"Harbor Commission" means the Board composed of 3, 5, 7 or 9 members with exclusive power to control the commercial aspects of the day-to-day operational of the public harbor and facilities in a continuous, peaceful and efficient manner, created by resolution of governing body of municipality where harbor is located as authorized by section 30.37, Statutes.

"Hazardous Waste" as defined in s. 144.61(5), Stats., means any solid wastes identified as hazardous waste under s. NR 181.12, Wis. Adm. Code (s. NR 347.03(11), Wis. Adm. Code).

"Head" means the difference in elevation between two points in a body of water.

"Headrace" means a "free-flow" tunnel or open channel which conveys water to the upper end of a penstock.

"Headwaters" means the beginning or source of a stream.
"Houseboat, Fixed" means a structure not actually used for navigation which extends beyond the ordinary high watermark of a navigable waterway and is kept in place either by cables to shoreline or by anchors or spudpoles attached to the bed of the waterway.

"Historic Maximum" means the highest recorded water level.

"Historic Minimum" means the lowest recorded water level.

"Hydraulic Dredging" see "dredging."

"Hydroelectric"

"Hydrograph"

"Hydropower"

"Hydrostatic Pressure"

"Impacts, Cumulative"

"Impacts, Secondary"

"Impoundment" means a body of water formed by retaining a stream or surface water drainage feature with a dam. Also a "flowage."

"Incidents of Navigation" means the activities which occur casually in connection with passing over water, e.g. swimming and fishing. See Hixon v. PSC.

"Ingress"

"Inland Waters" means all waters within or adjacent to the State of Wisconsin including the bays, bayous, and sloughs of the Mississippi River bottom, and except Lakes Superior and Michigan, Green Bay, Sturgeon Bay, Sawyer's Harbor and the Fox River from its mouth up to the dam at DePere (s. 29.01(4), Stats.).

"Intake Structure"

"International Great Lakes Datum (IGLD)" means a datum selected by the governments of the United States and Canada at Father Point, Quebec, for the Great Lakes-St. Lawrence River navigation system.

"Inundate"

"Invert" means the lowest point on the inside of a culvert.

"Invertebrate"

"Irrigation" means the operation of watering lands by artificial means for growing agricultural plants or sod.

"Jetty" means a structure extending into a body of water, and designed to prevent shoaling of a channel by littoral materials, and to direct and confine the stream. Jetties are built at the mouth of a river to help deepen and stabilize a channel.
"Lake" means any navigable body of water in a depression of land, or a navigable widening of a river characterized by the usual absence of any noticeable current from its inlet to its outlet.

"Lake, Oxbow"

"Lake, Raised" means a natural lake the levels of which have been raised above the natural ordinary high watermark by construction of a dam at its outlet.

"Level, Mean Sea" means the average height of the surface of the sea for all stages of the tide over a 19-year period, usually determined from hourly height readings. The most recent adjustment of the MSL elevation was in 1929.

"Level, Normal (streams and natural lakes)" means the water level resulting from normal occurrences of water.

"Level, Normal (impoundments)" means the water level traditionally maintained by operation of the dam, or water levels within the range established by order of the Department of Natural Resources and its predecessor agencies, or by the Federal Energy Regulatory Commission.

"Littoral" means of or pertaining to the shore.

"Littoral Drift" means the sedimentary material which moves in the zone of waves breaking on the shore because of waves and currents (NR 326.03(3), Wis. Adm. Code).

"Littoral Zone" means an area extending waterward from the shoreline to just beyond the zone of breaking waves or to the depth where sunlight no longer penetrates to the bottom.

"Locks"

"Macroinvertebrate"

"Marina" means a dock or basin providing secure mooring for motorboats and yachts; offering rental or sale of boats, slips, or dock space; and often offering supply, repair, and other facilities.

"Mechanical Dredging" see "dredging."

"Mid-Section Method"

"Milldam"

"Millrace"

"Mineral Fuel"

"Mining, Metallic"

"Mining, Nonmetallic"

"Monument" means visible marks or indications left on natural or other objects indicating the lines, boundaries or elevations involved in a survey.
"Mooring"

"Municipality" means (for purposes of Chapters 30 & 31) any city, village, town or county.

"Navigable" means suitable for navigation. In Wisconsin a navigable body of water is capable of floating the lightest boat or skiff used for recreation or any other purpose on a regularly recurring basis.

"Needles" means long relatively slim members (nearly vertical stoplogs) made of wood, metal or concrete used to close gate opening in dams by lodging one end of the member against a stop located at the bottom of the gate some distance upstream from the other rest or support for the member located at the top of the gate opening. A relatively large number of needles thus installed in a gate opening are used to close the gate opening during periods of normal or low stream flow. Needles are customarily removed during or in anticipation of high flow to provide added gate openings.

"Nesting Platform"

"Non-navigable" means not suitable for navigation according to the standards used in Wisconsin.

"Normal Operating Range" for impoundments, means the water level elevations bounded by the ordered maximum and ordered minimum or where levels have not been established it means the typical range of fluctuation.

"Obstruction" means a hindrance, obstacle or barrier in, over or across a watercourse that prevents or reduces uses such as navigation or incidents of navigation.

"Ordered Maximum" means the highest water level established by DNR order to be achieved by reasonable operation of a dam.

"Ordered Minimum" means the lowest water level established by DNR order to be achieved by reasonable operation of a dam.

"Ordinary High Water-mark (OHWM)" means the point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation, or other easily recognized characteristics (NR 320.03(4), Wis. Adm. Code).

"Outlet"

"Outlying Water" means Lakes Superior and Michigan, Green Bay, Sturgeon Bay, Sawyer Harbor and the Fox River from its mouth up to the dam at DePere (s. 39.01(4), Stats.).

"Pea Gravel" means washed, sorted, uniformly sized stones of any color approximately the size of a pea.

"Penstock" means a conduit or pipe used to conduct water from the reservoir or a headrace of a dam to the water wheels in the powerhouse.

"Permit, Major" means a DNR permit requiring public notice and opportunity for hearing or actions for which an environmental assessment is written.

"Permit, Minor" means a DNR permit not requiring public notice and opportunity for hearing nor requiring the preparation of an environmental assessment.
"Permitee"

"Pier" means any structure, extending channelward from the shore with water on both sides, built or maintained for the purpose of providing a berthing or mooring place for watercraft or for loading or unloading cargo or passengers onto or from watercraft and may include a temporary boat hoist without roof or walls (NR 326.03(6), Wis. Adm. Code).

"Pierhead Line" means a line established in the water adjacent to and roughly parallel to the shoreline under s. 30.13, Stats., by municipalities and subject to approval by the Department, for the purpose of creating uniformity in the length of piers extending from the shoreline into the waterway (NR 326.03(7), Wis. Adm. Code).

"Pile" means a long, heavy timber, or section of concrete or metal driven or jetted into the earth or waterway bed to serve as a support or protection.

"Pile Clusters"

"Pipe Arch" means a conduit having a roughly elliptical cross-section with a span (width) larger than its rise (height).

"Piping" means the progressive internal erosion of an embankment by seepage, appearing downstream as a hole discharging water which usually contains embankment material.

"Pitot Tube"

"Plan View" means an aerial or top view diagram or representation.

"Plowed Cable Crossing" means the practice of installing a cable in the bed of a watercourse by using a double throw plow which opens a trench into which the cable is immediately inserted, and thereafter covered by either the natural return of the watercourse bed material or by additional scraper blades which return the disturbed material to its former location.

"Policy" means a predetermined, written statement of the interpretation of, or the position in response to, an identified issue.

"Pollutant" means a contaminant or impurity capable of rendering unclean or impure the waters of the state, or making the same injurious to public health, harmful for commercial or recreational use, or deleterious to animal or plant life.

"Pollution" includes contaminating or rendering unclean or impure the waters of the state, or making the same injurious to public health, harmful for commercial or recreational use, or deleterious to fish, bird, animal or plant life (s. 144.01(10), Stats.).

"Pond"

"Portage" means an overland route for manually carrying boats and supplies around dams (NR 330.02(5), Wis. Adm. Code).

"Public Interest" means something of value to the public at large, as opposed to something primarily of value to an individual. It is frequently tied to the waterway itself and can then be interpreted as usefulness or value of the waterway as a natural resource to society.
"Public Trust Doctrine"

"Profile" means a diagram or representation through a cross-section or from the side.

"Public Rights" means uses of a body of water which are guaranteed to all citizens as a result of the State Constitution.

"Public Rights Stage"

"Public Use"

"Q_{7,2}" means the 7-day low flow that occurs on the average of once in two years.

"Q_{7,10}" means the 7-day low flow that occurs on the average of once in 10 years.

"Q_{100, \text{Regional Flood}}" means the flood determined to be representative of large floods known to have generally occurred in Wisconsin and which may be expected to occur on a particular stream because of its physical characteristics. The regional flood is based upon a statistical analysis of stream flow records available for the watershed and/or an analysis of rainfall and runoff characteristics in the general watershed region. The flood frequency of the regional flood is once in every 100 years; this means that in any given year there is a 1% chance that the regional flood may occur. During a typical 30-year mortgage period, the regional flood has a 26% chance of occurring.

"Raceway" means an artificial canal dug in the earth to carry a current of water.

"Raft, Ski Jump" means a float or structure secured in position on a navigable waterway usually having an inclined surface used by water skiers to deflect the skier up into the air.

"Raft, Swim" means a raft secured in position on a waterway and used by swimmers or divers.

"Raise and Enlarge" for dams, means to make structural changes which allow an increase in impoundment levels.

"Reach" means a portion of a river or stream extending from one significant change in hydraulic character of the river or stream to the next significant change. Reach limits are usually associated with breaks in the slope of the water surface profile and may be caused by bridges, dams, expansions and changes in water flow or in the streambed slope or vegetation.

"Reclamation"

"Recreational Use"

"Reliction" means an increase of the land area by the permanent withdrawal or recession of the water.

"Reservoir"

"Restoration"

"Retaining Wall"

"Right-of-Way (ROW)"
"Riparian" means an owner or lessee of land adjacent to a stream or lake (NR 326.03(8), Wis. Adm. Code).

"Riparian Land" means a parcel of land which includes therein a part of, or is bounded by a natural watercourse. (See also "Chain of Title")

"Riparian Lease" means a lease in part or whole of the riparian rights attendant to a parcel of land.

"Riparian Rights" means the rights of a person owning land containing or bordering on a watercourse to make use of the water for a reasonable, beneficial purpose.

"Riprap" means (1) a layer, or protective mound of stones randomly placed to prevent erosion, scour or sloughing of a structure or embankment, or (2) the stone used to protect the bank.

"River"

"Riverway"

"Runoff"

"Sand Blanket" means a layer of sand or similar material (pea gravel) placed on the bed of a lake or flowage at the shoreline extending into the waterway to provide a more desirable bottom character for use by swimmers.

"Scour" means the removal of material by waves and currents especially at the base or toe of a bank, of a shore structure, or downstream from a dam spillway or culvert.

"Scour Hole" means a depression or hole created by the scouring effect of water.

"Sedimentation"

"Seepage"

"Shoal" means (1) to become shallow, or (2) a sand bank or sand bar that causes the water to become shallow.

"Shore"

"Slice Gate" means a gate which can be raised or lowered by sliding in vertical guides.

"Solid Waste" means garbage, refuse and all other discarded or salvageable nonliquid, nongaseous material, including waste materials resulting from industrial, commercial and agricultural operations, and from domestic use and public services activities. It does not include solids or dissolved materials in wastewater effluents or other common water pollutants.

"Spawning Reef"

"Spoil" see "dredge spoil."

"Spillway" means a structure over or through which waters are discharged past a dam or embankment.

"Stoplog" means large logs or timbers or steel beams placed on top of each other with their ends held in guides on each side of a channel or conduit so as to provide a cheaper means of temporary gate closure than a vertical
"Stream" means a watercourse having a readily discernible source and terminus, banks, and beds, through which water flows at least periodically. It does not lose its character as a watercourse even though it may break up and disappear temporarily and reappear downstream.

"Stream Cover"

"Structure" means any construction, excluding fills, or any production or piece of work artificially built or composed of parts joined together in some definite manner having form, shape, and utility.

"Surplus Water" means any water of a stream which is not being beneficially used. Beneficial use includes but is not limited to irrigation, hydropower generation, industrial diversion, domestic and municipal water supply, and dilution or assimilation of municipal or industrial wastes.

"Swale" means (1) a depression between two ridges, or (2) a low-lying stretch of land.

"Swamp"

"Tailrace" means the tunnel, channel or conduit that conveys the discharge from the hydropower turbine to the river.

"Tailwater" means (1) the level of water in the tailrace at the nearest free surface to the hydropower turbine, (2) the level of water below a dam, or (3) the level of water at the downstream end of a culvert.

"Tainter Gate" means a gate with a curved upstream plate or skin and radial arms hinged to piers or other supporting structure.

"Temporary" means that which is to last for a limited time only, as distinguished from that which is perpetual, or indefinite, duration.

"Ties" means (1) measured distances and directions from a point of known position to offset monuments established to assist in the recovery of the point of known position, or (2) monuments themselves.

"Tie back"

"Tillable"

"Tin Whistle" means a corrugated metal pipe spillway and water control device commonly used in earth dams. The tin whistle consists of a hydraulically connected waterproof inlet pipe, a riser pipe within which stoplogs are typically installed, and a discharge pipe.

"Top Soil" means the uppermost surface layer of the ground before or after grading or otherwise removing. (This definition is solely for the purpose of defining the term as it is used in s. 30.19, Stats., and no inference should be drawn that the uppermost surface layer of the ground is adequate for purpose of revegetation after disturbance) (NR 340.02(4), Wis. Adm. Code.)

"Toxic & Hazardous Wastes" see "Hazardous Wastes".

"Tree Drops"
"Turbidity"

"Ultimate Connection" means the joining of a waterway to an existing body of navigable water by means of a natural drainage course or an open or closed conduit, either of which tend to confine and direct flow into the existing body of navigable water (NR 340.02(13), Wis. Adm. Code).

"Upland"

"USGS" means the United States Geological Survey.

"USC&GS" means the United States Coast and Geodetic Survey.

"V Deflectors"

"Velocity"

"Watercourse" means a running stream of water; a natural stream fed from permanent or natural sources, including rivers, creeks, runs and rivulets. There must be a stream, usually flowing in a particular direction, though it need not flow continuously. It may sometimes be dry. It must flow in a definite channel, having a bed or banks, and usually discharges itself into some other stream or body of water. It must be something more than a mere surface drainage over the entire face of the tract of land, occasioned by unusual freshets or other extraordinary causes. (Hoyt v. City of Hudson)

"Waterfowl"

"Watershed"

"Waterway" means any body of water declared navigable pursuant to s. 30.10, Stats. (NR 320.03(2), Wis. Adm. Code).

"Wave"

"Weep Hole" means a hole or pipe existing from the downstream portion of an embankment is intended to allow water seeping through the embankment to leave the embankment without causing loss of embankment material or the creation of uplift pressures which would threaten the structural stability of the embankment.

"Weir" means a low dam or wall across a stream to raise the upstream water level or provide a fixed point for measuring the flow water.

"Wetland" means an area where water is near, at or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which has soils indicative of wet conditions.

"Wetted Perimeter"

"Wharf" means any structure extending along the shore and generally connected with the uplands throughout its length, built or maintained for the purpose of providing a berthing or mooring place for watercraft or for loading or unloading cargo or passengers onto or from watercraft.

"Wicket Gates" means flap gates on a turbine (waterwheel) housing used to regulate the water flow and direction of water to the turbine.
"Wingdam"

"Wing Deflector"
References


GUIDANCE PURPOSE AND DISCLAIMER

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A. PURPOSE

Navigable waterways are those that are public and protected by law. Navigability is the critical element which establishes public rights in a waterway. Even where certain uses of nonnavigable waters may require a permit, it is because of the potentially adverse impacts on navigable waters that we have authority. Thus the question of navigability determines whether certain requirements may be imposed on the use or modification of rivers, streams and lakes.

B. MECHANISM

Determining that a body of water is navigable means that the Department has jurisdiction under the water regulatory laws of Chapters 30 and 31, Wisconsin Statutes.

Section 30.10, Wis. Stats., declares all lakes, streams, sloughs, bayous, and marsh outlets which are navigable-in-fact for any purpose whatsoever to be navigable and public waters. Through their subsequent decisions, the Wisconsin Supreme Court established what was in fact the test of navigability. The court's test of navigability has evolved from one of commercial uses to include recreational uses.

C. HISTORY

Development of our navigability concepts began with the "discovery" by England of lands in the New World.

The law pertaining to navigable water in Wisconsin and the problems arising from its application is difficult to understand unless one knows something of the legal history under which it was developed.

England claimed the lands which she held in the United States by the right of discovery. There were Indians upon the land but they were considered merely as temporary occupants, not owners of the land. England gave patents for large tracts of land to various companies, along with the right to administer the land.
The Revolutionary War between Great Britain and the thirteen original American colonies began on April 19, 1775. The Second Continental Congress of the colonies adopted the Declaration of Independence on July 4, 1776, and declared the United States a sovereign nation. The war with Britain lasted until September 3, 1783, when a liberal peace treaty established the American boundaries as far west as the Mississippi River. The original colonies became independent sovereign states and as such each had the right to make their own rules of law pertaining to the rights of the public and riparian land owners in the waters of the state.

Before the adoption of the United States Constitution, there was considerable discussion among the colonies as to what was to be done with the territory lying west of the colonies (the Northwest Territory). Virginia claimed what afterward became West Virginia, Connecticut, the greater part of Ohio, Indiana, Illinois, Michigan, Wisconsin and Minnesota. The states with no land claims, notably Maryland, felt that these lands had been wrested by common endeavor and sacrifice and therefore should belong to the Union. Virginia finally ceded the territory to the United States on two conditions. One was that the states to be formed out of the Northwest Territory were to be sovereign and independent states having the same rights of sovereignty as the original states. The other condition was that streams flowing into the Mississippi and the St. Lawrence Rivers and the carrying places between the same were to be forever free public highways. Congress accepted the cession on the terms laid down, and the conditions were incorporated in the Northwest Ordinance of 1787 which constituted the laws for government of the Northwest Territory. Hence, each state formed out of the Northwest Territory was entitled to make its own rules concerning the rights which the public and the riparian landowner had in the waters of the state. If the waters were navigable under the test adopted by the state, then they were free, public highways.

The condition that the navigable waters should be free public highways was of great importance to the original states. The rivers were the principal highways since there were no over-land highways into the wilderness. There were only three important routes of travel connecting the Mississippi Valley with the east. One of these was from Lake Erie up the Maumee River, a short portage to the Miami River and down the Ohio River. Another was from Lake Michigan by way of the Chicago River to the Mississippi River and the Des Plaines and Illinois Rivers. The third route was the Wisconsin-Fox waterway. This waterway was extremely important even before the canal was built. One firm employed thirty ox teams to transport the commodities across the narrow neck of land between the Wisconsin River and the Fox River.

The Northwest Ordinance provided that the navigable waters leading into the Mississippi and the St. Lawrence were to be free, public highways. There is nothing in the Ordinance or the Constitution of the United States which defines navigable waters. Each state was left to adopt its own definition of navigability.

Wisconsin was admitted as a territory on April 20, 1836, and the Wisconsin Enabling Act in Section 3 provides as follows:

And be it further enacted, That the said State of Wisconsin shall have concurrent jurisdiction on the Mississippi and all other rivers and waters bordering on the said State of Wisconsin, so far as the same shall form a common boundary to said State and any other State or States now or hereafter to be formed or bounded by the same; and said river and waters, and the navigable waters leading into the same, shall be common highways and forever free as well to the inhabitants of said State as to all other citizens of the United States without any tax, duty, impost or toll, therefor.

Even before gaining statehood, the Territorial Legislatures of 1840 and 1841 considered the waters of the territory of such importance in the development and well being of the territory as to require protection and regulation. The first statutory definition of navigability in Wisconsin, Act No. 9, was adopted by the Territorial Legislature of 1841 and provided:

That all rivers and streams of water in this territory in all places where the same have been
meandered and returned as navigable by the surveyors employed by the United States Government are hereby declared navigable to such an extent, that no dam, bridge, or other obstruction may be made in or over the same without the permission of the legislature.

The Territorial Legislature of 1840 by Act No. 48 enacted the first Milldam Act (now ss. 31.31 - 31.34). The act authorized the owner of a dam site on a navigable stream to build a dam in the stream and to flood the lands of others without their consent, subject only to the payment of damages. The purpose of the Milldam Act was to encourage the construction of gristmills, sawmills, and other mills by permitting the flowing of the lands of others without going through the slow process and delay of acquiring flowage easements for the mill pond.

The act admitting the state of Wisconsin into the Union on March 4, 1849 (approved May 29, 1849), reads in part as follows:

Be it enacted by the Senate and the House of Representatives of the United States of America in Congress assembled, That the State of Wisconsin be, and is hereby, admitted to be one of the United States of America, and is hereby admitted into the Union on an equal footing with the original States, in all respects whatever, ...

In the act admitting the state of Wisconsin into the Union the provision that the navigable waters shall be public highways was omitted. However, the Constitution of the State, adopted by the Territorial Convention on February 17, 1848, and approved by the act admitting Wisconsin into the Union, contains the following provisions:

...and the river Mississippi and the navigable waters leading into the Mississippi and St. Lawrence, and the carrying places between the same, shall be common highways and forever free, as well to the inhabitants of the State as to the citizens of the United States, without any tax, impost or duty therefor. (Article IX, Section 1.)

Such parts of the common law as are now in force in the territory of Wisconsin not inconsistent with this Constitution shall be and continue part of the law of this state until altered or suspended by the legislature (Article XIV, Section 13).

The 1840 Milldam Act was amended 1853 (Chapter 72) and in 1858 (Chapter 41) to read as follows:

Section 2. All rivers and streams of water in this state, in all places where the same have been meandered, and returned as navigable by the surveyors employed by the United States government, are hereby declared navigable to such an extent that no dam, bridge, or other obstruction may be made in or over the same, without the permission of the legislature: provided, that nothing herein contained shall be construed so as to affect any act now in force granting to towns, or county boards of supervisors, the power to erect or authorize the construction of bridges across such streams.

Section 3. The boundaries of lands adjoining waters, and the several and respective rights of individuals, the state, and its citizens in respect to all such lands and waters, shall be determined in conformity to the common law, so far as applicable, as evidenced by judicial determinations in other states, in which the courts in such cases have adhered to its principles.

In 1853 the Legislature took a further step in the formation of the state policy with respect to waters of the State by adopting Chapter 72, Laws of 1853. This law declared that the common law of England, in so far as it may be applicable, shall be the law of Wisconsin in "determining" the boundaries of lands adjoining waters and the respective rights of individuals, the State, and its citizens in respect to all of such lands or waters.
Since the State of Wisconsin has no tidewater, the English test of the flow and ebb of tide was repudiated and the test of navigability in fact was adopted. When the question of "what constitutes a navigable stream" came before the courts, logs had been floated down many streams in the State for many years and that fact held great weight in the courts' decisions.

In the first Wisconsin Supreme Court case on "what is a navigable stream" which involved the obstruction to rafts of lumber on the Oconto River by a mill dam, the court held that the fact that a stream was meandered and returned as navigable by the U.S Surveyors was not the test of navigability. The Court held that the effect of the statutes was not to declare that meandered streams were navigable in fact but only navigable to the extent that no obstruction could be placed in them without consent of the legislature (Jones v. Pettibone, 2 Wis. 225 (1853)).

A few years later in Whisler v. Wilkinson et al, 22 Wis. 546 (1868), the court held that the rivers of the state capable of floating the products of the country, such as logs, rafts, and lumber, were by common law public highways.

A few years later in Olson v. Merrill, 42 Wis. 203 (1877), the question arose whether Levis Creek, a nonmeandered stream in Jackson County, was navigable. The case states the following:

In 1863, before the logs were driven, there was brush across the creek, and alders on each side, and it had formed alder tow-heads. Without the improvement that was put on, we could not have run a log down. ... You could not see any creek, on account of the brush and alders; ... and some cuts had to be made, as a sixteen-foot log would not swing around in some places unless there was a cut made.

It also appears that men were stationed on both banks of the stream to keep the logs moving. The stream could not be used for log driving at a low stage or even at ordinary stage of water but only during "rises" which usually occurred three or four times each year - in the spring and summer. Such rises varied in duration from 4 to 13 days.

The court held the creek to be navigable, declaring:

...We deem it essential to the public interest in the pine-growing regions of the state, spoken of in Whisler v. Wilkinson, supra, to adopt the rule collected from the authorities in Angell on Watercourses, Sec. 537, and substantially adopted in the charge of the court below: Nor is it essential to the public easement that the capacity of the stream, as above defined, should be continuous; or, in other words, that its ordinary state, at all seasons of the year, should be such as to make it navigable. If it is ordinarily subject to periodical fluctuations in the volume and height of its water, attributable to natural causes, and recurring as regularly as the seasons, and if its periods of high water or navigable capacity ordinarily continue a sufficient length of time to make it useful as a highway, it is subject to the public easement.

In 1858 the legislature reenacted the 1840 Milldam Act in an attempt to codify the law regulating the multitude of dams which had been erected under the 1840 Act and by special acts (private franchises) in the interim. The law allowed that "any person may erect and maintain a water mill and dam to raise water...across any stream that is not navigable...."

Quickly the question "what is a nonnavigable stream" as used in the Milldam Act came before the Supreme Court.

In Wood v. Hustis, 17 Wis. 429 (1863), the court held that "the words 'any stream that is not navigable,' in the milldam law were designed to exclude not only streams which are navigable in fact, but such as have been legally
declared public highways."

In Allaby v. Mauston Electric Service Co., 135 Wis. 345 (1908), the court held that the test of navigability under the Milldam Act is not the same as the test of navigability with reference to determining whether a stream is a public highway (waterway). The court said:

In view of the extent to which this court has gone in declaring streams navigable in the sense that they are not public highways, it is obvious that the word was used in this statute in a very different signification. ...A stream so petty that a saw log or a skiff cannot be floated upon its waters in the manner described in Olson v. Merrill, supra, would certainly yield no water power of any practical value to appliances such as were common in 1840.

The following streams were held to be nonnavigable within the meaning of the Milldam Act: the Lemonweir River at Mauston having 550 square miles of drainage area (Allaby v. Mauston Electric Service Co., (1908) 135 Wis. 345); the Apple River at Somerset having 450 square miles of drainage area (McDonald v. Apple River Power Co., (1916) 164 Wis. 450); and the Yahara River at Madison locks having 251 square miles of drainage area (Clute v. Briggs, (1868) 22 Wis. 579).

In Willow River Club v. Wade, 100 Wis. 86 (1898), the court determined the navigability of Wisconsin rivers was found in the navigable capacity - "those rivers are public navigable rivers in law which are navigable in fact." Further the court held that rivers which are navigable in fact are used or are susceptible of being used for "useful commerce and transportation of persons and property thereon." This case also ruled that although the title to the bed of a navigable stream is in the riparian owner(s) the river is held in trust for the use of the public and the right to fish in such a stream is a "right common to the public and one who keeps within the limits of the stream may exercise such right without being guilty of trespass."

The Legislature in 1895 enacted Chapter 328 pertaining to meandered lakes, which read as follows:

Section 1. All lakes within this state, which have been meandered and returned as navigable by the surveyors employed by the government of the United States, or which have been so meandered and are navigable in fact, are hereby declared navigable and public waters, and all persons shall have the right and privileges thereon, and thereto, to the same extent and with like effect as in, to, and over, and upon all other navigable or public waters within this state; provided, this act shall not affect pending litigation or interfere with any vested rights that have heretofore been acquired upon any such lakes or streams.

Section 2. All acts and parts of acts inconsistent or conflicting with this act are hereby repealed.

Similar to the rulings for streams, the court in 1912 (Bixby v. Parish, 148 Wis. 421) ruled that the test of navigability for lakes was the same for streams - navigable in fact.

By 1900 log driving had practically ceased. The forests were denuded not only of the floatable pine timber but to a great extent of the hardwoods. Many of the small water powers which turned the machinery of gristmills and sawmills and other mills, as they required major repairs, were being abandoned. It was cheaper to purchase power from a high voltage transmission line as these were gradually extended to different parts of the State. The recreational industry was gradually supplementing the lumbering and it demanded the strict interpretation of the new definition of "navigable streams," - that is, a stream "navigable for any purpose whatsoever." Private fishing and hunting grounds common in the late 1800s, were frowned upon and navigable water may not be used for those purposes.

From 1836 to 1910 the Legislature had granted 665 franchises for the construction of dams for various purposes,
such as the development of power, improvement of navigation, to facilitate log driving, boomage, or pisciculture, to feed canals, to create ponds, to flow cranberry marshes, for the "public good," and for general municipal purposes. During the same period many dams had been constructed under the Milldam Act.

Besides the foregoing, many franchises were granted for the construction of bridges, levees, canals, etc.

In 1909 the Legislature appointed a Special Legislative Committee to study water power, forestry, and drainage, and report the same with its recommendations to the 1911 Legislature. No franchises were granted after the appointment of the special legislative committee. The report of the committee resulted in the so-called Water Power Acts of 1911, 1913, and 1915.

Under those acts, the Wisconsin Railroad Commission (now DNR) was given exclusive jurisdiction and power to issue permits for the construction of dams in navigable water, certain jurisdiction over dams constructed under the Milldam Act, and the numerous problems arising from obstructions in navigable water.

There were various reasons for this delegation of power, the foremost of which was to provide for the recapture by the State of the so-called "white coal" or water power. It was believed that the State should share in the benefits of the potential power which resides in falling water which could only be captured by the consent of the state.

Other reasons for the delegation of power were that the legislature no longer had time nor sufficient knowledge to study the plans for dams or to supervise their construction, and the failure of a dam might cause loss of life and damage to property, as was the case in 1911 when the Reservoir Dam and the Hatfield Dam in Black River failed and caused the destruction of most of the business section of the city of Black River Falls.

The Water Power Laws of 1911 and 1913 contained certain provisions which were determined to be unconstitutional, resulting in the enactment of the 1915 Water Power Law, under which the Department is now acting.

The first water power act, Chapter 652, Laws of 1911, amended the definition of "navigable streams" contained in Section 1596, Wisconsin Statutes of 1898:

The rivers and streams which have been meandered and returned as navigable by the surveyors employed by the government of the United States are hereby declared so far as the same have been meandered, to the extent that no dam, bridge or other obstruction shall be made in or over the same without permission of the legislature....

It was amended to read:

Section 1596(1). All rivers and streams which have been meandered and returned as navigable by the surveyors employed by the government of the United States and all rivers and streams meandered or nonmeandered which are navigable in fact for any purpose whatsoever are hereby declared navigable to the extent that no dam, bridge, or other obstruction shall be made in or over the same without permission of the legislature... (Now s. 30.01(2)).

The amendment wrought a far-reaching and important change in the statutory definition of the term "navigable streams," but the courts have not, so far as we have been able to ascertain, interpreted the meaning of the phrase "navigable in fact for any purpose whatsoever." The amendment was doubtless intended to bring into the navigable class many streams which were nonnavigable under the old statutory definition.

The Milldam Act uses the negative of the definition of navigable streams. Section 3374, Statutes of 1898,
Any person may erect and maintain a water mill and a dam to raise water for working it upon and across any stream that is not navigable upon the terms and conditions and subject to the regulations hereinafter expressed.

By Section 1, Chapter 533, Laws of 1911, the foregoing section was amended to read:

Section 3374. Any person may erect and maintain a water mill and a dam to raise water for working it upon and across any stream that is not navigable in fact for any purpose whatsoever upon the terms and conditions and subject to the regulations hereinafter expressed.

In Chapter 31 (Water Power Law), under the heading "Definitions," s. 31.01(2), it is provided as follows:

"Navigable waters" means all waters declared navigable by Chapter 30 of these statutes.

Thus, since the 1911 amendment, streams fall only in two classifications, namely, those which are navigable in fact for any purpose whatsoever and therefore public for log driving and other lawful purposes, and those which are not navigable for any purpose whatsoever and therefore private.

The amendment wiped out the technical meaning which the courts had applied to the term "nonnavigable" in the Milldam Act. Since the amendment a milldam may only be constructed in a stream not navigable for any purpose whatsoever subject only to the supervision and control of the Department.

The Milldam Act (Chapter 146, Statutes of 1915) and the Water Power Law (Chapter 69m, Statutes of 1915) were renumbered, revised, by Chapter 474, Laws of 1917 to form Chapter 31 of the Statutes.

Several judicial actions have occurred since that time which materially influence navigability concepts.

In Muench v. Public Service Commission 261 Wis. 492 (1952) the Wisconsin Supreme Court broadened the test of navigability to include recreational use of water as a criteria. The stream involved was navigable by the sawlog test and the test of navigability was not an issue before the court. Nevertheless, the court reviewed the law of navigability as stated in Wisconsin decisions and concluded:

The right of the citizens of the state to enjoy our navigable streams for recreational purposes, including the enjoyment of scenic beauty, is a legal right that is entitled to all the protection which is given financial rights.

Our holding in this respect is in keeping with the trend manifested in the development of the law of navigable waters in this state to extend the rights of the general public to the recreational use of the waters of this state, and to protect the public in the enjoyment of such rights.

Considering the 1911 amendment which the court said was very similar to the wording of the statute then in effect, the court declared:

Therefore, since 1911 it is no longer necessary in determining navigability of streams to establish a past history of floating of logs, or other use of commercial transportation, because any stream is "navigable in fact" which is capable of floating any boat, skiff, or canoe, of the shallowest draft used for recreational purposes.

The court apparently felt that the 1911 amendment's addition of the words "navigable in fact for any purpose
whatsoever" provided the basis for its conclusion that the definition of navigability had been broadened.

The most recent "guidance" on how navigability is determined is found in DeGayner & Company Inc., v. Department of Natural Resources, 70 Wis. 2d 936 (1975). While the case basically restated Olson v. Merrill, supra, the following major principles of law were set forth or reaffirmed by the Court:

1. "A stream need not, however, be in its 'normal or natural condition' when navigability is determined." The Court states throughout its decision that navigability may be determined during recurring periods of high water such as spring floods. The Court approved the Department order's assessment that periods of high water of a regularly recurring annual nature were sufficient to declare Five Mile Creek navigable-in-fact.

2. The Court concurred with the Department order's conclusion that the existence of beaver and their dams on Five Mile Creek was a "normal and natural" condition of Five Mile Creek. The facts established the presence of beaver for at least thirty-seven years. Also while individual dams did not remain intact for more than a few years, the evidence established that the beaver constantly built and rebuilt dams in the stream. The Court concluded that the existence of beaver on the stream was not transitory.

3. Regardless of whether the beaver dams were a natural condition, the Court approved the lower court conclusion that it is irrelevant whether the circumstances creating navigability are natural or artificial. Citing several cases the Court stated: "(t)his court has frequently held that, where artificial conditions create navigability, the stream is navigable in fact where such conditions have existed for a period of time."

In recent years the legislature has taken several actions which attempt to limit our jurisdiction on certain waterways. The actions did not attempt to redefine navigability but only attempted to exclude certain waters which are navigable from our authority to regulate.

Because of farmers' concern over obtaining dredging permits, the 1977 Legislature amended s. 30.10(4) to limit Department jurisdiction over drainage ditches in organized drainage districts. The legislature declared all such ditches not navigable insofar as the application of Chapter 30, except where it could be shown that the ditches were navigable streams before ditching or had a previous stream history. However, in deciding State of Wisconsin v. Francis Dwyer, 91 Wis. 2d (Ct. App.) 440 (1979), the court said that a dredging permit was needed in any stream - navigable or not.

Most recently, the legislature (1981) amended s. 30.10 to change the definition of navigability of farm drainage ditches. The 1977 subsection (30.10(4)(c)) applied only to drainage ditches in drainage districts established under Chapter 88. The present subsection applies to any farm drainage ditch regardless of whether or not it is in a drainage district. It also states that farm drainage ditches are not navigable unless they are shown to have been navigable streams before "ditchery." The former version of the law allowed the Department to declare a drainage ditch navigable if it had a previous stream history (navigable or nonnavigable). Chapter 120 on dredging provides further details.

**OWNERSHIP OF STREAM AND LAKE BEDS**

Determination of ownership of a streambed or lakebed may have various consequences. In Wisconsin the beds of streams, whether navigable or nonnavigable, are owned to the middle or thread of the stream by the owners of the adjacent shorelands. Beds of natural navigable lakes are owned by the State (Bigsby v. Parish, 148 Wis. 421 (1912)). Private ownership of the bed of a navigable stream has always been subject to the overriding public right of navigation and to other public rights in navigable waters. (Munninghoff v. Wisconsin Conservation Commission, 255 Wis. 252 (1949)). The Wisconsin Supreme Court has repeatedly used strong language to
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Chapter 30

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underline its support of the public rights in navigable waters.

The ownership of the bed underlying a man-made lake or reservoir formed by damming a stream or otherwise impounding a natural flow of water remains in the hands of the abutting landowner unless it was purchased. Even though a lake now exists, bed ownership is determined as though the previous existing stream still remains. The public has the same rights in a flowage as it does in a navigable stream.

The Wisconsin Supreme Court has held that the State owns the beds underlying natural navigable lakes and ponds. Although the language of early Wisconsin cases did not specifically designate the State's ownership as a trust title, later decisions describe the State's ownership as sovereign and in trust for the public for navigation and its various incidents. This trust arising out of the incidents of navigation not only permits public use where access is available but also allows the State to regulate the types of activity that may occur on the surfaces of the water.

Riparian rights exist by virtue of ownership of the bank or shore in contact with the water. The Wisconsin Supreme Court, in Doemel v. Jantz, 180 Wis. 225 (1923) stated:

... the following principles therefore appear to be firmly established by the jurisprudence of this state and of other states so as to become a part of the common law:

1. The rights of riparian owner are based upon his title to the ownership of the banks or the uplands.

2. Such ownership gives him exclusive privileges of the shore for the purpose of access to his land and the water.

3. The privileges are valuable privileges incident to his title to the land of which he cannot be deprived for any private use, and which the public can only acquire from him by purchase, prescription, or by the exercise of the right of eminent domain.

4. That such rights include the right of using the shore for the purposes of building piers, wharves, harbors, or booms in the aid of navigation, and of building walls or other protection so as to prevent loss of soil by the process of erosion....

These principles deduced from the cases are so firmly established as to be invulnerable to attack.

These precepts have been reiterated by the Court on numerous occasions. In Munninghoff v. Wisconsin Conservation Commission, 255 Wis. 252 (1949) the Court stated:

In Wisconsin, the owner of the banks of the stream is the owner of the bed... The owner of the submerged soil of a running stream does not own the running water, but he does have certain exclusive rights to make a reasonable use of the water as it passes over or along his land. For instance, he may erect a pier for navigation.... The riparian's exclusive right to use the water arises directly from the fact that nonriparians have no access to the stream without trespass upon riparian lands.

Under Wisconsin common law, therefore, only a riparian owner has "certain exclusive rights to make a reasonable use" of the water and the shoreline on the riparian property. This "exclusive use" of the riparian property is subject, however, to the paramount interest of the public which is protected by the "trust doctrine."

The legislature has authorized incursion by a riparian owner into this public trust area subject to the limitations and procedures contained in Chapters 30 and 31. See Town of Ashwaubenon v. PSC, 22 Wis. 2d 38 (1963).
Other Items Related to Stream and Lake Bed Ownership.

Riparian owners may separate the ownership of the stream bed from the ownership of the abutting lands. Riparian rights are "freely alienable and may be separated from upland ownership" (Mayer v. Gruber, 29 Wis. 2d 168 (1965)) and thus riparian rights can be sold or leased.

Another "right" of riparian ownership (designed to preserve the riparians access to the water) is the title to the land formed by gradual and natural accretions (see Doemel v. Jantz 180 W. 225 (1923)).

FEDERAL NAVIGATION THEORY AND DETERMINATIONS IN WISCONSIN

Section 17 of the book "Water-Use Law and Administration in Wisconsin" by Ellis Beuscher, Howard, & DeBraal includes a thorough examination of the federal navigation doctrine and source of federal authority to develop or regulate navigable waters. A full appreciation of the development of federal authority can be gained by reviewing that section. The following comments discuss the principal aspects of federal authority.

The primary federal regulatory authority is based on Article 1, Section 8, clause 3 of the United States Constitution, which established the congressional power "to regulate Commerce with foreign Nations, and among the several states, and with the Indian Tribes." Navigation, long recognized as an essential part of commerce, was thus brought within the powers of Congress. Federal regulatory jurisdiction is usually defined in terms of "navigable waters," a phrase which originally referred to a waterbody's physical capacity to carry waterborne commerce. Thus, the early courts found rivers to be navigable:

when they are used, or are susceptible of being used ... as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water.

And they constitute navigable waters of the United States within the meaning of the acts of Congress, in contradistinction from the navigable waters of the States, when they form in their ordinary condition by themselves, or by uniting with other waters, a continued highway over which commerce is or may be carried on with other States or foreign countries in the customary modes in which such commerce is conducted by water. (The Steamer Daniel Ball v. United States, 77 U.S. (10 Wall.) 557, 563 (1871)).

Navigable waters of the United States are those waters which are presently, or have been in the past, or may be in the future susceptible for use for purposes of interstate or foreign commerce. A determination of navigability, once made, is not extinguished by later actions or events which impede or destroy navigable capacity.

With the River and Harbor Act of 1899, Congress established the U.S Army Corps of Engineers' authority as a regulatory agency. The law was passed to insure that water commerce routes would be kept operable and free of obstructions to navigation. Section 10 of the act requires that permits be obtained from the Corps for dredging and for the construction of piers and other structures which could affect navigation. The 1899 law limited the agency's permit jurisdiction to navigable waters of the United States.

In 1972, Congress expanded the Corps' regulatory jurisdiction with the passage of amendments to the Federal Water Pollution Control Act. Section 404 of the amendments made it illegal to place fill or dredged material in "waters of the United States" without a Corps permit. The Corps interpreted the new legislation as applying to the same waters as the 1899 law.

However, the Natural Resources Defense Council took the matter to court, arguing that Congress had intended the Corps to exert jurisdiction over a much greater area. In 1975 the district court for the District of Columbia found in favor of the NRDC and directed the Corps to publish new regulations to extend its regulatory authority. Thousands of square miles were brought under the Corp's jurisdiction.

To implement the federal court decision, the Corps wrote regulations to expand the Section 404 program in three...
phases. Phase 1 was instituted in July 1975. It required permits for the placement of dredged or fill material in navigable waters of the United States as defined in the 1899 River and Harbor Act plus wetlands adjacent to those waters. Under the second phase, which became effective in the fall of 1976, the program was extended to include primary tributaries of navigable waters as far as their headwaters. Headwaters means streams with a normal flow of at least five cu. ft. per second. Lakes larger than five acres with surface outlets that ultimately drain into navigable waters also were included in the program.

The third phase of expanding jurisdiction brought all waters with a flow of five cu. ft. - adjacent wetlands included - under the Section 404 program in 1977. That same year, Congress passed the Clean Water Act. That law superseded the Federal Water Pollution Control Act, incorporating Section 404 with minor revisions.

Today, the primary features of the Corps' permit program are governed by Section 404 of the Clean Water Act and Section 10 of the River and Harbor Act of 1899. The Section 10 program requires that a permit be obtained from the Corps before dredging or building in water that support interstate or foreign commerce ("navigable waters of the United States"). Section 404 regulates only the discharge of dredged or fill material in "waters of the United States."

The U.S. Army Corps of Engineers (Corps), the U.S. Coast Guard and the Federal Energy Regulatory Commission (FERC) regulate activities in federally navigable waters. The U.S. Environmental Protection Agency (EPA) and the U.S. Fish and Wildlife Service often comment or otherwise cooperate in federal water regulation.

The FERC licenses hydropower projects throughout Wisconsin. The FERC may require a license for a dam even on federally nonnavigable streams if the dam could affect interstate water commerce.

The EPA has jurisdiction over all waters for purposes of pollution control on the theory that pollution of any water will eventually find its way into federal navigable waters. The Department administers the pollutant discharge elimination system (WPDES) program on behalf of the EPA. A permit is required for discharges into any "waters of the state." "Waters of the state," as defined in Chapter 147, Wis. Stats, is completely different than navigable waters, either federal or state.

Manual Code 1462.2 explains how the state and federal water regulation programs are related. The Manual Code includes a list of federal navigable waters as classified by the Secretary of the Army.

**PROCEDURE**

*In the field.*

The best evidence of navigability is whether a lake or stream is navigable-in-fact. Using the direction in DeGayner v. D.N.R., 70 Wis. 2d 936 (1975), a stream is navigable-in-fact if it is navigable by canoe or skiff on a reoccurring basis (i.e. annually during freshets) and has a discernable bed and banks.

The test of navigability is whether you can float a canoe or duck skiff down the stream. Obstacles or interruptions to navigation such as brush, fallen trees, tight meanders, do not make a stream not navigable-in-fact by themselves. Remember that Lewis Creek (subject of Olson v. Merrill, supra.) was found to be navigable-in-fact even in light of the fact that it was (and still is) such a winding, twisting, alder covered creek that the logs being driven down it couldn't make some of the bends and were continually hanging up in the alders. Take thorough notes and gather information that will help support your determination:

1. Size of the boat or canoe. Your weight and that of any partners. Your starting and ending points, date, startup and finishing time.

2. The water level. Use the top of a bridge, culvert or other permanent reference point; measure level at
start and finish of floating.

3. The relation of the water level to the ordinary high-water mark (OHWM) (see Chapter 40 for instructions on finding the OHWM).

4. Estimated or measured flow.

5. Photographs—particularly with navigator in boat at narrow, normal, and obstructed sites.

6. Any interruption or obstacles to navigation such as fallen trees, brush, etc.

**Other sources of navigability determinations.**
Previous determinations of navigability provide evidence of the recurrence of navigability. They are found in the following sources:

1. Court declaration of navigability.

2. Legislative designation of navigable waterways.

3. Previous navigation-in-fact "shocker surveys," available at Area, District and Central Offices.

4. Previous navigability determinations on file at district offices and the Bureau of Water Regulation and Zoning, Madison DNR. Note: nonnavigable determinations made before DeGayner (1975) may NOT be controlling.

5. Public highway declarations by Town Boards.

6. U.S. Corps Engineers or Coast Guard (and possibly Federal Energy Regulatory Commission) listings.

**EDUCATION**

"Public or Private I - Navigability" brochure - Pub. 5-3500(82)

1259H.PERM
DATE: July 19, 1984

TO: District Directors

PMMS Response
Put in: Chapter 30, Water Regulation Handbook

FROM: Robert W. Roden - WRZ/5

Distribution: All Program Staff

SUBJECT: Access to Waters from Road R.O.W.

We have been asked if access to waters of the state from public road right-of-ways is limited to those lands held in fee title by a body of government and if public access to waters of the state could be denied in cases where the highway R.O.W. is obtained by easement or lease agreements.

This question is addressed in Walker v. Green Lake County (1955), 269 Wis. 103 which provided that access to navigable waters is a proper public highway use and that it would be obtained even when the fee title is not held by the governing body. This decision was also commented on positively in 52 OAG 161 (1963).

Therefore, public access to navigable waters of the state is not limited to those cases where the land is owned in fee title by the governing body. Such access may not interfere with the use of the highway by the public generally and may be limited in the case of a controlled-access highways pursuant to 83.027 and 84.25 Wis. Stats.

Reviewed By:
John Coke
Michael Cain

RWR:msg

5823H
A question has been raised about what action the Department can take when a person lawfully wading a stream has been physically threatened by owners of adjacent lands.

The various public rights relating to navigation and its incidents were established over time through court actions resulting from the attempts of landowners to prosecute for trespassing individuals who were undertaking these activities within the confines of a navigable body of water (example cases include Willow River Club v. Wade and Diana v. Husting). It is clear under common law, therefore, that as long as the individual remains within the area where water currently exists ("keep your feet wet"), there is no valid legal basis for a landowner to prevent these activities from occurring. The primary exception is that trapping is not a legally protected public right if the trap is anchored to the bed of the waterway (Munninghoff v. Conservation Commission).

Beyond the common law provisions, section 30.15, Stats., relates to obstructions of navigation. Subsection 30.15(l) provides, among other things, that any person who "unlawfully obstructs any navigable waters and thereby impairs the free navigation thereof" is violating this section. While subsection 30.15(l)(a) arguably is not restricted by any specific language within it to physical obstruction of the waterway, it is clear from the context of the remainder of the statute, that this is the intent. Beyond this, the Department and its predecessor agencies have not interpreted this statute as covering threats of physical harm or other attempts to impede the usage of a waterbody by a member of the public without placing some physical object, such as a fence, boom, or other device, into the waterway to obstruct navigation.

The only apparent legal recourses for this situation are: 1) a civil lawsuit by the citizen to obtain an injunction against the individuals who are interfering with his or her right to fish and wade the stream, or seeking after-the-fact relief such as bringing charges for assault and battery; and 2) a suit brought by the State to enjoin property owners from actions of this type. While the law is clear that a landowner has no legal basis for this type of interference with a constitutionally-guaranteed right, there is no guaranteed way of preventing this kind of harassment or assuring the safety of any individual.

RWR:hf

Reviewed By:
   Scott Hausmann
   Dale Simon
   Michael Cain

cc: Mike Cain - LC/5
    Ralph Christensen - LE/5
We have been asked whether the DeGayner & Co., Inc. v. Department of Natural Resources, 70 Wis 2d 936 (1575) decision can be used as a basis for determining the navigability of wetlands. The question was concerning isolated wetlands and floodplain wetlands affected by flooding but whose elevation is higher than the O.H.W.M. of a stream. For clarity in the following discussion we should view "wetlands" as a class or subset of the broader terms - lakes and ponds.

Although the DeGayner decision is one of many Supreme Court decisions dealing with questions concerning the navigability of streams, the general principles of "navigability" set forth in that case apply to lakes, ponds and other waterways as well. The DeGayner decision reiterated that "Navigability, then, is not to be determined by the 'normal' condition of the stream" and went on to establish that whether "the circumstances creating navigability were natural or artificial is irrelevant." In describing navigability, DeGayner said "the test is whether the stream has periods of navigable capacity which ordinarily recur from year to year, e.g., spring freshets, or has continued navigable long enough to make it useful as a highway for recreation or commerce."

In their evaluation of navigable waters in Water - Use Law and Administration, Ellis and Beuscher (1970) said the following. Although only the words 'navigable in fact' without the additional words 'for any purpose whatsoever,' are included in the statutory definition of lakes, it appears likely that the same test applies to determine navigability of lakes and streams." (at p. 42)

Another case having a bearing on lakes and ponds is Ne - pee - nauk Club v. Wilson, 96 Wis. 290, (1897). The evidence of that case showed: that the waters of a small stream spread into Mud Lake, 35 to 65 rods in width, and three miles in length, and then reappeared as a stream; that Mud Lake was covered with water in the spring, in the fall, and after heavy rains; that in the summer it was marshy and partially dry; that it was filled with rushes and wild rice; and that sometimes it could be navigated by small skiffs and canoes. Although Mud Lake was not navigable by any kind of boat through its entire length during the greater part of the year, the court concluded that it was a navigable lake.

The latest nonstream related court decision concerning navigability is State v. Bleck, 114 Wis 2nd 454 (1983). One of the issues presented for review in that case was "what are navigable waters?" The court determined..."that the term 'navigable waters' within the meaning of secs. 30.12 and 30.15, Stats., for the purpose of establishing the state's jurisdiction, are waters that are navigable in fact. Once the state has proven that the body of water is navigable in fact, it has established its jurisdiction under those statutes." Another argument made in that case was that the lake was artificial and private. The court analyzed this argument and concluded for a variety of reasons that the party objecting to the state's assertion of jurisdiction has the burden of proof to show that a body of water is artificial and private. The general presumption then, in question of navigability, should be that a body of water which is "navigable in fact" is natural and public. These two factors along with...
various decisions indicating that the state's jurisdiction on navigable waters extends to the O.H.W.M. are about
the sum and substance of legal interpretations on navigability of lakes.

The real issue to be considered when evaluating lakes and ponds (including wetlands) is whether they are
"navigable in fact" by the above criteria. Although one might argue that there should be some minimum cut off
size for a body of water to be considered navigable, any body of water capable of floating a canoe is valuable and
should be considered navigable. To support this conclusion, consider the resource value associated with even a
tiny spring pond or isolated wetland pond. They have fishery and/or wildlife values and preserving these values
is in the public interest even if they are not readily accessible to the public.

Our experience has shown that the most critical factor in establishing the navigability of isolated wetland lakes
(or ponds) is the establishment of historical information on the regularly reoccurring nature of the navigable
capacity. If the photographic and cartographic evidence shows such reoccurrence, it is our opinion that the
DeGayner analysis can be applied to lakes and will be sustained.

Prepared by: Bob Sonntag
Requested by: Joe Kurz
Reviewed by: Mike Cain
Dale Simon
APPENDIX "F"

RIVERS AND STREAMS DECLARED NAVIGABLE

NAMES OF: Section 1607. The following rivers, having been heretofore so declared by acts of the Legislature, are hereby declared to be navigable to the extent thereof, stated respectively, as follows:

Big Plover River. In the Counties of Portage and Marathon; from the northern boundary line of T28,R10, to its mouth.

Coon River. In the County of Vernon; between the Village of Chaseburg and the Mississippi River.

Eagle Creek or Waumandee River. In the County of Buffalo; from the mill erected by Gearkee and Binder for two miles or more to its mouth.

Fond du Lac River. From the forks thereof to its mouth.

Fox River. From Waukesha, in Waukesha County, to Waterford, in Racine County.

Kinnickinnick River. In the County of Milwaukee; so much as runs through the NE° of S8 in the town of Lake.

Little Wolf River. In the County of Waupaca.

Mecan River. In the County of Marquette; from the dam in S7,T16,R11, to its junction with the Fox; subject to the limitations contained in Chapter 328, Private and Local Laws of 1866.

Pine River and its tributaries. In the County of Richland.

Rock River. As high up as T14,R15.

West Twin River and its tributaries. In the Counties of Brown and Manitowoc.

Wolf River. In the County of Kewaunee; so much as lies in T25 and T26,R25.

And the following navigable for driving logs:

Black Creek. In the County of Outagamie; in T23 and 24,R17 and T24, R18.

Duck Creek. In the County of Outagamie; in T22 and T23,R17; T22,R18.

Kewaunee River. In Kewaunee County.

Kickapoo River, the west branch thereof. In the County of Vernon; from the north line of T12, R3, to its junction with the main Kickapoo, for rafting lumber and timber.

Maple Creek. In the Counties of Waupaca and Outagamie; in T23,R14; T23,R15.

Rib River. In the County of Marathon; from Big Rib Falls in T29,R5, to its 14th for logs, timber and lumber.
Rush River. In the County of Pierce; from Thompson's mill in the town of Martell to its mouth.

Scarbro Creek and School Creek. In the County of Kewaunee.

Shioc River and its tributaries. For logs and timber.

Waupaca River. In the County of Portage; from the mills of Jerome Nelson in the town of Amherst to its crossing of the range line between ranges nine and ten for logs, timber and lumber.

But this Section shall not affect or impair any of the acts of the Legislature specially relating to any of said streams.

The revisers of 1878 said of this section: "This is a recapitulation in brief of the acts heretofore passed, and still unrepealed, declaring rivers to be navigable. It is a matter of public and general law, and it has seemed desirable to collect and present together a recapitulation of the legislation on the matter. The acts mentioned contain various provisions, differing among themselves, relating to bridges, mills and mill-dams already built, to punishment for obstructions, and the like, which it has not seemed proper to incorporate. The only legislative acts on the subject of the section which the revisers have been able to find are:

1. As to Baraboo River: Ch. 61, P. & L. 1853, declaring it navigable from east line of T13N, of R1E, to its mouth, which was repealed by Ch. 225, 1875.

2. Big Plover River: Ch. 73, P. & L. 1853, amended by Ch. 100, 1864.


4. Coon River: Ch. 315, 1876.

5. Duck Creek: Ch. 48, P. & L. 1866.


7. Fond du lac River: Ch. 104, 1849.


10. West Branch of Kickapoo River: Ch. 250, 1875.

11. Kinnickinnick River: Ch. 115, 1876.


13. Maple Creek: Ch. 353, 1865.

14. Mecan River: Ch. 328, P. & L. 1866. This act contains several peculiar provisions.


17. Rock River: No. 49, 1839.

18. Rush River: Ch. 40, 1863.


20. Sheboygan River was declared navigable from the outlet of Sheboygan Lake to its mouth by Ch. 366, P. & L. 1855; amended by Ch. 221, P. & L. 1857, by excepting that portion west of R23. The acts repealed by Ch. 141, P. & L. 1859.

21. Shioc River: Ch. 84, 1868.

22. Waupaca River: Ch. 170, 1874.

23. West Twin River: Ch. 175, P. & L. 1866.

24. Wolf River: Ch. 90, P. & L. 1855.

It will be observed that some rivers are declared 'navigable' and public highways; others navigable for logs, or for lumber and timber. Different consequences probably follow, as all rivers that are in fact navigable for logs, timber and lumber require no legislative declaration to make them so, and that declaration amounts to no more, perhaps, than proof of the fact.

Rights on meandered lakes. Section 1607a. All lakes wholly or partly within this state which have been meandered and returned as navigable by the surveyors employed by the government of the United States or which have been so meandered and are navigable-in-fact are hereby declared to be navigable and public waters, and all persons shall have the right to pass to and fro, be and remain thereon and have and enjoy all other rights and privileges thereon and thereto to the same extent and with the like effect as in, to, over and upon any other navigable or public waters; provided, that this section shall not affect actions pending on the first day of May, 1895, or interfere with any rights theretofore acquired.

Chapter 328, 1895, extended by adding "or partly" and inserting date of approval of act.
Questions & Answers on Stream Access removed 9/01, due to budget legislation.
Date: March 4, 1988

To: District Directors (WMC)

Insertion: Chapter 30, Water Regulation Handbook

Distribution: All Program Staff

From: Scott Hausmann - WZ

Subject: Public vs. Private Rights on Flowages. Minnow Trapping

Attached is a letter concerning public versus private rights on flowages and a letter concerning minnow trapping regulation.

SH:el

Attach.
February 25, 1988

IN REPLY REFER TO: 8300

Mr. Raymond Roder
Whyte & Hirschboeck
44 East Mifflin Street
Madison, WI 53703

Subject: Private Rights in Gregerson Lake, Waupaca County, WI

Dear Mr. Roder:

The file concerning the questions of the rights of the public versus the riparian proprietors on Gregerson Lake, Waupaca County, WI, has been referred to me for review.

Based on the facts submitted by you and representatives of the Department's Oshkosh area office, it appears clear that Gregerson Lake is a flowage, rather than a natural lake. The bed of Gregerson Lake is therefore in private ownership. The owners may be the adjacent riparians or may be another party if such other party holds record title to the flowed lands.

Your letter indicates that Elmer Beier is the owner of record for a portion of the bed of Gregerson Lake and has paid taxes on that area. That ownership does give Mr. Beier some control over activities on Gregerson Lake. We are not, however, in total agreement with your letter of September 30, 1987, concerning the extent of the control exerted by riparian landowners on such a body of water.

We agree that Mr. Beier can exert control over trapping, including minnow trapping, where the traps are attached to the bed in the area of the flowage where he owns the bed. This conclusion is based on Munninghoff v. Wisconsin Conservation-Commission, 255 Wis. 252 (1949), which concluded that the anchoring of traps on privately owned stream or lake bed is a trespass and is not an incident of navigation.

We also agree that Mr. Beier could limit "ice cutting" on the area bounded by his bed ownership where the purpose of the ice cutting is the removal of the ice from the premises. There is case law in Wisconsin from the period when commercial ice cutting was an important business which indicates that the owner of the bed also holds title to the ice and is entitled to recover the value of ice removed from the area by another person without the owners permission. See Haase v. Kingston Cooperative Creamery, 212 Wis. 585 (1933).

It does not follow from the above decisions that the landowners can limit activities on the water or ice surface nor does it follow from these cases that a landowner can restrict the cutting of ice holes which are incident to fishing. The Wisconsin Supreme Court noted both in Haase and Munninghoff that the public has full rights to use the water, the ice surface, and the bed of navigable lakes of streams for enjoyment of public rights. It is clear that a member of the public has full rights to enjoy the incidents of navigation on Gregerson Lake. Fishing, skating, and other uses of the water and ice are such public rights and cannot be limited or controlled by riparian owners.

I hope this addresses the concerns of your client. If you have additional questions, please feel free to contact me.

Sincerely,
February 11, 1988

Mr. Robert Cyran
Cyran's Live Bait
736 N. Old Wausau Rd.
Stevens Point, WI  54481

Dear Mr. Cyran:

Thank you for your recent letter, expressing your interests and questions regarding minnow trapping. I hope the following information can answer your questions.

Section 30.12, Wisconsin Statutes, requires that a DNR permit be obtained to place any structure, including a minnow trap, on the bottom of a navigable lake or stream. However, the issuance of a bait dealer's license by the Department (under Section 29.137 Wisconsin Statutes) satisfies the requirement for Departmental approval of minnow traps. Consequently, Section 30.12 Wisconsin Statutes permits will not be needed if you are operating under a valid bait dealer's license, unless the traps are larger than the standard size restrictions imposed by NR 20.10, Wisconsin Administrative Code (listed below). If you do not already have a bait dealer's license you can apply for one through:

DNR Area Headquarters
Room 118, 1681 2nd Ave. S.
Wisconsin Rapids, WI 54494
Telephone: (715)421-7800

In the case of non-standard minnow traps you must have a bait dealer's license and obtain a permit for the nonstandard gear under Section NR 20.10(5), Wisconsin Administrative Code.

To avoid violating trespass law, lawful access to the water is needed, either through public access or permission from private landowners. Permission is also needed from private landowners to place a minnow trap in front of their property in a stream since a stream bed in Wisconsin is owned by the riparian landowners or owners of the stream's upland banks. If a minnow trap or traps rest on both sides of the mid-channel or thread of the stream then permission is needed from the landowners on both sides of the stream to avoid trespassing on their lands.

In lakes, to place minnow traps in shallow water permission is needed from the landowner whose land the trap is in front of to prevent an unauthorized infringement on the landowner's riparian rights. If the traps are placed in deeper water, beyond the line of navigability (beyond 4 feet in depth), then the traps can be placed anywhere in the lake as long as there is lawful access to the lake by public access or the permission of one riparian landowner.

Minnow traps shall not be longer than 24 inches or wider than 16 inches square, with an opening in the throat of the trap not greater than 1.5 inches in diameter, unless a permit has been issued by the Department for use of nonstandard minnow gear. S. NR 20.10, Wis. Adm. Code. Nonstandard gear permits are required for all "oversize" minnow traps set in both private, non-navigable waters as well as public navigable waters. These permits can also be applied for by contacting the aforementioned DNR area office.
I hope this information is helpful. If you have any further questions please contact the local water management specialist or myself.

Sincerely,

Peter Flaherty,
Attorney at Law
Bureau of Legal Services

cc: Hal Schwenn - FM/4
Gary Homuth - LE/5
DATE: October 3, 1988 IN REPLY REFER TO: 3550

TO: District Directors (WMC)

PMMS Response
Insertion: Chapter 30, Water Regulation Handbook
Chapter 3&4, Floodplain & Shoreland to Dams Guidebook

FROM: Scott Hausmann

SUBJECT: Navigability of Appurtenances

Distribution: WRZ Program Staff
County Zoning Administrator
Bur. of Legal Services

ISSUES

When is the headrace, tailrace or other appurtenance to a dam considered navigable water? Are they considered enlargements or channel changes? Where is the ordinary high watermark?

The answers to these questions directly affect:
• Where the shoreland zone boundary and setbacks are measured from
• The application of water regulatory jurisdiction to activities in artificial waterways
• Dam safety and boating safety near dams

SUMMARY OF CONCLUSIONS
Legally, the water passing through a dam or any appurtenance to a dam on a navigable waterway is considered navigable. DNR may allow or order the owner of a dam to restrict access or give warnings for safety or other public interest reasons. Separate Chapter 30 permits for activities in appurtenances to dams are not required so long as the dam is authorized. The public interest in and uses of appurtenances should be considered under Chapter 31 authorities and procedures. The shoreland zone is measured from the ordinary high watermark of the appurtenance unless there is no potential for runoff or other adverse impacts on the values that shoreland zoning protects in the appurtenance or the waterway to which it is connected.

BACKGROUND

Determination of Navigable Status
State ex.rel. Preigel v. Northern States Power Co. (242 Wis. 345) establishes two key points in this issue. First, the public retained the right to fish and navigate in waters diverted from a river into an earthen canal and wood stave pipeline. Second, the term dam is not limited to the part of the structure directly across the riverbed, but includes the entire development from flashboard to tailrace, millrace or canal carrying water to the powerhouse. In Preigel the court cited the rule established by Dwinel v. Barnard (28 Me. 554, 562) that one who forms a new channel to conduct the waters of a navigable stream automatically authorizes the public to use the new channel for the purposes of navigation to which the old channel was used or adapted.

Navigability, Public Use and Safety
Public access and use need not be encouraged for all appurtenances even though they are navigable. In some situations, public use may be hazardous. Chapter 31.03(2) in general and NR 330 in particular authorize actions to protect public safety.
The OHWM and the Shoreland Zone

The OHWM may be found by usual means if the appurtenance has natural stream characteristics. For open channels of concrete, metal or other man-made material, the edge of the channel should be used as the OHWM.

The level, flow and quality of water and fish and wildlife habitat in open artificial waterways can be affected by construction and earth disturbing activities in the shoreland zone in the same way as a natural channel. If the channel is completely enclosed or is otherwise constructed so runoff from the adjacent land surface could not reach it, then shoreland activities would not likely have an impact. In such cases, the shoreland zone should be measured from the OHWM of the navigable waterway to which the artificial channel is connected.

Application of Chapter 30

Even though appurtenances to dams are navigable - and activities in them have potential impacts - separate Chapter 30 permits should not be required for individual actions below the OHWM of these waterways. The same protection provided by the Chapter 30 permit process can be provided under Chapter 31 procedures for construction, alteration or abandonment of dams. Public interest considerations, notice and hearing requirements are very similar.

Related Guidance: March 25, 1985 - Shoreland Zoning Jurisdiction.

Requested By: Bob Roden - WZ

Reviewed By: Scott Hausmann Larry Larson – WZ
Michael Cain - LC

MEV:EB:el
We have been asked several questions regarding navigability determinations related to the following situation: In 1977 several Department employees determined a portion of a stream to be nonnavigable. Since then the landowner channeled the stream and placed fill into adjoining wetlands and the floodplain. This action confined the flow to a channel estimated to average 3 feet deep and 3 feet wide, and observed (not proven) navigable during high water periods. This situation raises the following questions:

1). Q: May we now declare the stream navigable and assert Chapter 30 jurisdiction over future projects.
   A: Two factors come into play in reaching an answer to this question. The first factor is the navigability standard in use at the time of the past determination of non-navigability. In this case the standard used is that of the most recent applicable Supreme Court Decision found in DeGayner & Company Inc. v. Department of Natural Resources, 70 Wis. 2d 936 (1975). Therefore, in this situation the question of navigability is based on the current standard and results in a proper determination that the stream was non-navigable. If, however, a past determination of non-navigability was based on pre-DeGayner standards it may be possible to prove, using DeGayner standards, that the stream is now navigable and subject to Chapter 30 jurisdiction for future projects.

The second factor to be considered is the applicability of the navigability standard based on s. 30.10, Wis. Stats. In 1981 s. 30.10, Wis. Stats. was amended to exclude "farm drainage ditches" from navigable waters unless it is shown the ditches were navigable streams before ditching occurred. Therefore, if the above situation involves an artificial channel which drains water from lands which are used for agricultural purposes and the past determination of non-navigability was based on the DeGayner standards the farm drainage ditch exclusion would apply and the stream would not be subject to our jurisdiction in the future even though it could be proven to now be navigable-in-fact. If, however, this situation does not involve a farm drainage ditch and a determination can be made using DeGayner standards that it is now navigable we could assert jurisdiction over future projects.

2). Q: What procedure should we use?
   A: Normal permit and/or enforcement procedures should be used for future projects that are considered navigable using DeGayner standards and do not involve farm drainage ditches. For future projects involving farm drainage ditches we will have the additional burden of proving that there was a previous history of navigability based on DeGayner. In cases where we have advance notice of proposed projects that would be subject to our jurisdiction we should notify the project proponent in writing of our position and advise them to apply for the applicable permits.

3). Q: May we apply Chapter 30 jurisdiction to past projects?
   A: Asserting jurisdiction over past projects may be possible if we can prove that the stream was navigable at the time the project was constructed using the navigability standards that were in place at
that time. If the stream was considered non-navigable at the time of construction we would not have jurisdiction over past projects even though the stream is considered navigable now. However, we would have jurisdiction over future projects.

4). Q: May we assert any floodplain jurisdiction over past or future projects? The stream in this situation is not mapped.

A: Yes. Although the area in this situation is not mapped, if any future channel modifications affect other property owners appropriate legal arrangements are required. Further detailed guidance for areas that are mapped and/or studied is included in a previous program guidance listed below. For past projects in unmapped or unstudied areas where we have Chapter 30 jurisdiction as outlined above, we can also assert floodplain jurisdiction where appropriate.


Requested by: Dale Lang- NCD

Drafted by: John Coke- WZ

Reviewed by: Scott Hausmann WZ/6
Larry Larson
Mike Cain- LC/5
DATE: April 5 1993

TO: District Directors

DISTRIBUTION: District Water Mgmt. Supervisors
Area Water Mgmt. Specialists
Bureau of Water Reg. and Zoning
County Zoning Administrators
City/Village Zoning Administrators
Bureau of Legal Services
Regional Planning Commissions

INSERTION: Floodplain/Shoreland Guidebook, p. 4.11; Water Regulation Handbook, Chapter 30

FROM: Scott Hausmann

SUBJECT: Applicability of Chapter 30 and Shoreland Zoning to Farm Drainage Ditches Navigable-in-fact But Without Stream History

SUMMARY OF GUIDANCE

When use of any parcel adjacent to a ditch that is navigable-in-fact is converted from agriculture, Chapter 30 applies even if the ditch had no stream history. Shoreland zoning applies whenever a structural use is proposed, even if the structure is part of an agricultural use.

The statutory language regarding drainage ditches must be read as an exemption for a particular use of land (agriculture) rather than as an exemption for a waterway or segment of a waterway. Clearly, agricultural and nonagricultural activities can have equal impacts on waterways, but agriculture has a special status that should not interfere with protection of waters from the impacts of other uses.

STATUTORY GUIDANCE

Navigable Waters
Section 30.10(4)(c) says that farm drainage ditches without stream history are not navigable, defining farm drainage ditches as "any artificial channel which drains water from lands which are used for agricultural purposes."

The phrase in section 30.10(4)(c), "lands which are used for agricultural purposes," supports the conclusion that the exemption applies to parcels of land. Reading the statute to mean that ditches themselves are not navigable, therefore exempt, until all of the lands drained by the ditch are converted from agriculture would allow anyone (farmer or not) with land adjacent to a ditch to alter the ditch in any way they saw fit. In addition, such a reading allows lands along a ditch to be structurally developed, before regulations would apply - resulting in impacts to the waterway and a host of nonconforming uses.

Section 144.26(2)(d) defines navigable waters as "Lake Superior, Lake Michigan, all natural inland lakes within this state and all streams, ponds, sloughs, flowages and other waters within the territorial limits of this state, including the Wisconsin portion of boundary waters, which are navigable under the laws of this state."

Sections 144.26 (2m) and 87.30 (1m) specify three conditions which must all be met in order for a parcel
adjacent to a ditch to be exempt from shoreland zoning. One of the conditions is that the parcel remain in nonstructural agricultural use. As a result, shoreland zoning applies to any structural use adjacent to a ditch that is navigable-in-fact.

Agriculture
For Chapter 30 determinations, use the definition of agriculture in 30.40(l): "Agricultural use" means beekeeping; dairying; egg production; feedlots; grazing; floriculture; raising of livestock; raising of poultry; raising of fruits, nuts and berries; raising of grains, grass, mint and seed crops; raising of vegetables and sod farming. Based on the definition above, nonstructural agricultural uses are pasture and cultivation.

PRACTICAL OUTCOMES

Administration
● When someone inquires about local or state permits, when a local zoning decision is reviewed, or when a complaint is received, then the regulations will be applied. Proposals for activities from owners whose lands are not in agricultural use require Chapter 30 and shoreland zoning permits.* Any proposal for structural use requires a shoreland zoning permit. No tracking of land use change for this purpose is needed.

● Without additional staff at state or local levels, we will respond to complaints and consider the same factors as we do in deciding whether to pursue enforcement for any other Chapter 30 or zoning situation.

Impacts on Waterways
Although most ditches do not receive much public recreational use, the objectives of Chapter 30 and shoreland zoning can be significantly affected by activities along ditches. Runoff carrying pollutants can readily reach natural navigable waterways through ditches. Ditches can acquire significant fish and wildlife habitat and recreational values even while in use for agricultural drainage.

Note: Floodplain zoning regulations only apply if a ditch is mapped on the floodplain regulatory map, whether or not the ditch is navigable in fact.

Impacts on Navigation
Under existing law as portions of these ditches are no longer legally declared nonnavigable by s. 30.10, the public gains the right to navigate in those portions. This legal requirement obviously can create a very practical problem - alternating segments of public and private water on the same waterway until major portions if not the entire ditch is open to navigation. We would ask that staff do their best in dealing with this potential problem and to advise us of any problems which come up.

RELATED GUIDANCE
Shoreland Zoning Jurisdiction - 3/28/85
Opinions of the Attorney General - 3/6/74 and 10/7/74; 3/8/90
Mine Reclamation: Navigable Waters - 1/28/88
Navigability Determinations - 8/20/90

DRAFTED
Mary Ellen Vollbrecht, SED
Scott Hausmann, WZ/6

REVIEVED
Michael Cain, LC/5
Linda Meyer, LC/5
Robert W. Roden, WZ/6
print this out and insert in chapter 30 of your water reg guidebook.

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From: Andryk, Tim A  
Sent: Tuesday, August 01, 2000 8:52 AM  
To: Cain, Michael J; Kavanaugh, Edwina C; Simon, Byron D; Stoerzer, Lois J; Eisch, Shawn T  
Cc: Koch, Richard J - DNR; Rosenberger, Robert; Hanaway, Michael J  
Subject: RE: Prohibiting navigation

A few years ago in response to a complaint on the Rock River sign going into Horicon, I had some research done on the subject.

Federal statutes grant authority to the Secretary of Interior to regulate or prohibit boating recreation and navigation on National Wildlife Refuges. The Secretary has done this through 50 CFR S. 27.32, which authorizes U.S. Fish and Wildlife Service to prohibit or set conditions on the use of boats in National Wildlife Refuges. Federal case law says that the federal government can interfere with river navigation guaranteed by state law as part of a detailed and comprehensive regulatory plan, or to carry out treaty obligation.

Basically, the federal law pre-empts the state law and state constitution which establish state public rights of navigation on these waters. Consequently, the U.S. Fish and Wildlife Service can post these closed to boating, but they should be doing it in consultation with the state as part of comprehensive management plan.

Tim Andryk  
Attorney  
WI DNR Bureau of Legal Services  
608-264-9228

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From: Eisch, Shawn T  
Sent: Monday, July 31, 2000 3:30 PM  
To: Cain, Michael J; Kavanaugh, Edwina C; Simon, Byron D; Stoerzer, Lois J; Andryk, Tim A  
Cc: Koch, Richard J - DNR; Rosenberger, Robert; Hanaway, Michael J  
Subject: Prohibiting navigation

In the Southwest corner of the map enclosed there is a navigable stream that goes into the Foxriver NWR. The feds have a sign at the entrance of the creek prohibiting access (I have not seen yet).

I spoke with Diane Kitchen -USF&WL who was unable to give me the reason, however concluded that the feds are allowed to exclude people from entering the refuge regardless of navigability (state jurisdiction). The Rock River in the Horicon marsh evidently has this same type of prohibition on navigability.

Does the feds have authority over the State to prohibit navigation through a refuge? If so could I get the documentation to show our Local Representative (Joan Spillner & Scott Kempley raised the issue).

Please comment.

Shawn Eisch  
Water Management Specialist
GUIDANCE PURPOSE AND DISCLAIMER

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance cannot be relied upon and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes, common law and administrative rules to the relevant facts.

This file is an electronic version of a chapter of the Waterway and Wetland Handbook. This document was scanned from the master handbook chapter kept at the Bureau of Fisheries and Habitat Protection central office in Madison. All effort was made to ensure this scanned electronic copy is an actual copy of the hardcopy document. Due to the electronic scanning process, there may be rare instances of typographical errors, omissions or improperly formatted pages. Please refer to the master handbook if accurate transcription is required.

I. Purpose

The delineation of the ordinary high-water mark (OHWM) is a critical element in the administration of Wisconsin water law and is necessary for an effective water management program. The OHWM is the boundary between riparian owned uplands and the publicly owned beds of natural lakes. It is the boundary of public rights and interest in the waters of navigable streams and lakes except when the water is above the OHWM public rights are "enlarged." When the water is below the OHWM a riparian owner has a qualified right to use the land between the actual water level and the OHWM.

Department field staff determine the OHWM through on-site investigation and analysis of physical and biological indicators on a case-by-case basis.

II. Definition of OHWM in Wisconsin

Although "ordinary high-water mark" was used in a number of Wisconsin Supreme Court cases in the 1800's, the first definition of ordinary high-water mark is found in the Wisconsin Supreme Court case Lawrence v. American Writing Paper Co. (1911), 144 Wis. 556, 562:

...ordinary high-water mark, that is the point up to which the presence and action of the water is so continuous as to leave a distinct mark by erosion, destruction of vegetation, or other easily recognized characteristic.

Three years later the Supreme Court redefined and expanded the definition in Diana Shooting Club v. Husting (1914), 156 Wis. 261, 272:
By ordinary high-water mark is meant the point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation, or other easily recognized characteristic.

One of the contentions in the Diana case had been that public rights in navigable waters "consists of nothing more than a right to pass to and from over the open waters" and that a person had "no right to leave the open part of the stream or push into the vegetation" growing through or above the water along the bank or shore. The Supreme Court did not accept this contention, ruling that public rights in navigable waters extend between the boundaries of the ordinary high-water marks and it is immaterial "what the character of the stream or waters is. It may be deep or shallow, clear or covered with aquatic vegetation." The Court then added the wording "on the bank or shore" and the word "terrestrial" to the Lawrence definition to emphasize that the ordinary high-water mark is not at the edge of open water adjacent to aquatic vegetation but on the bank or shore where terrestrial vegetation either begins or is destroyed.

The "distinct mark" must be manifested by "erosion, destruction of terrestrial vegetation or other easily recognizable characteristic"; however only one of the preceding manifestations need be present to qualify as such a mark. The phrase "other easily recognized characteristic" is highly significant since it allows flexibility as to what indicators in the natural environment qualify as the water-established mark.

Diana also stated:

And where the bank or shore at any particular place is of such character that it is impossible or difficult to ascertain where the point of ordinary high-water mark is, recourse may be had to other places on the bank or shore of the same stream or lake to determine whether a given stage of water is above or below the ordinary high-water mark.

This tells us two things: the area below the ordinary high-water mark need not be covered with water at all times, and where no mark can be found, one can look for marks in other areas and transfer the information through stage or elevation readings. No court cases have specified what a reasonable distance is to find the OHWM at another site nor whether marks must be transferred from similar areas. No court decisions have modified the Diana definition. The Diana definition is flexible and gives the Department the latitude to analyze varying physical conditions.

The courts have not upheld OHWM determinations which were not based on biological or physical indicators. In the case State v. McDonald Lumber Co. (1962) 18 Wis. (2d) 173, the state charged that the defendant illegally placed fill on the bed of Green Bay. The state did not attempt to use the Diana definition to prove the fill was below the OHWM of Green Bay because all the adjacent land was disturbed. Instead, the state offered an elevation for the ordinary high-water mark based on Lake Michigan water level records compiled by the Army Corps of Engineers for the period 1860-1959. The state asserted that the average of the high-water levels recorded was 581.0 feet above sea level and thus the ordinary high-water mark was at that elevation. The trial court found McDonald guilty of filling part of the lakebed but refused to order removal of the fill because the location of the ordinary high-water mark, the boundary of the lakebed, was not proved by the state.

The Supreme Court sustained the trial court's decision ruling that "the term ordinary high-water mark has been defined in Diana Shooting Club v. Husting (1914), 156 Wis. 261, 172," and "that the location of such ordinary high-water mark was not proved by the state" by its use of water level records.

III. Public and Riparian Rights

In Wisconsin riparian rights vary in accordance with the nature of the body of water. With respect to the
ownership of the bed of the stream, a riparian owner owns to the thread of the stream (Walker v. Shepardson (1855) 4 Wis. 495; Ne-pe-nauk Club v. Wilson (1897) 96 Wis. 290). The title of the riparian owner is, however, a qualified one, subject to the paramount interest of the state (Muench v. Public Service Comm. (1952) 261 Wis. 492; Ashwaubenon v. Public Service Comm. (1963), 22 Wis. (2d) 38). However, the owner of a land abutting a natural lake owns to the OHWM only, since title to the submerged lands beneath a lake belongs to the state (Angelo v. Railroad Commission (1928) 194 Wis. 543).

Private landowners whose lands make lateral contact with the waters of navigable lakes, where the state owns the bed, enjoy the exclusive right to access for private use (Delaplaine v. Chicago and Northwestern Ry Co., (1877) 42 Wis. 214). The general public can exercise its rights only if access to the water can be gained without trespassing over private property. As the recent decision in State v. McFarren (1974) 62 Wis. 2d 492, which reiterates Doemel v. Jantz (1923) 180 Wis. 225, points out:

A riparian owner has a qualified right to the land between the actual water level and the ordinary high-water mark; he may exclude the public therefrom but he may not interfere with the rights of the public for navigable purposes.

The sketches below illustrate the public right in relation to the OHWM:
Recall that riparian rights in Wisconsin exist by virtue of ownership of the bank or shore in contact with the water and not by title to the soil under the water (Colson v. Salzman (1956) 272 Wis. 397 and Diedrich v. Northwestern Union Ry Co. (1877) 42 Wis. 248 (involving a lake)). In Wisconsin the general rule is that the owner of the upland abutting a natural stream or body of water is presumed to possess riparian rights. However, because riparian owners may separate the riparian rights from ownership of the abutting lands it "is equally clear that one who acquires land abutting a stream or body of water may acquire no more than is conveyed by his deed" (Mayer v. Grueber, (1965), 29 Wis. (2d) 168).

The presumption in favor of owning a portion of the bed of a waterway is not applicable where an artificial lake or body of water is concerned. "An artificial lake located wholly on the property of a single owner is his to use as he sees fit, provided, of course, the use is lawful. He may if he wishes reserve to himself or his assigns the exclusive use of the lake or water rights." (Mayer v. Grueber, supra). In the Mayer v. Grueber case the court held that the "(D)e fendent, who acquired part of a tract of land abutting on an artificial lake by deed described the lake front boundary as running along the easterly bank, could not successfully assert he had been accorded riparian rights to use the lake for recreational purposes as against the claim of the owners of the remainder of the tract who also had title to the submerged land, since he acquired only what was granted by the words of his conveyance - property rights up to the waters edge - and had no ownership rights in the bed of the lake and hence no rights in the waters above."

The ownership of beds underlying artificial lakes or reservoirs caused by the erection of a dam remains in the hands of the abutting owner (or deed holder) unless purchased (Haase v. Kingston Cooperative Creamery Association (1933), 212 Wis. 585). In other words, though a lake now exists, bed ownership is determined as though the prior existing stream still remained. The court ruled "(W)e think the true rule is this: where the owner of land creates an artificial body of water upon his own premises, he may permit the public to enjoy the ordinary use of such waters, and, it may be, that by the lapse of time such enjoyment will ripen into a dedication which he will not be permitted to destroy. But such a use of the waters does not amount to an adverse possession in favor of the state giving the state title to the land under the waters and..."

The court continued "(I)t is true that where waters of a natural, navigable lake are artificially raised, the public and the riparian owners enjoy the same rights in and upon such artificial waters. 'The artificial condition originally created by the dam becomes by lapse of time a natural condition.' Johnson v. Einerman, 140 Wis. 327, 122 N.W. 775. However it does not seem necessary, in order to secure to the public the right which the public has enjoyed for a period of time equal to that required by the statute of limitations, that the title to the land should be held to have thereby passed from private ownership to the ownership of the state."

Among other incidents of riparian ownership, and to preserve the riparian's access to the water, is the right to the land formed by gradual and natural accretions and uncovered by reliction. (Doemel v. Jantz supra., Attorney General Ex Rel. Bay Boom Wild Rice and Fur Co. (1920) 172 Wis. 363 and Baldwin v. Anderson (1968) 40 Wis. 2d 33.) This is true even though the riparian does not have title to the bed of a meandered lake. (Roberts v. Rust (1899) 104 Wis. 619 and Boorman v. Sunnuchs (1877) 42 Wis. 223)

One who owns both banks of a navigable or nonnavigable Wisconsin stream has title to the entire bed of the stream between the boundaries of his land. An interesting exception to the rule that a riparian proprietor owns to the thread of the stream occurs on the Mississippi River. Since that river forms the Minnesota-Wisconsin boundary, and the actual boundary line is the centerline of the main navigation channel of the river, a Wisconsin riparian does not own the bed to the thread of the river, but to the centerline of the main navigation channel (Franzini v. Layland (1903) 120 Wis. 72). The middle of the main navigation channel may be very close to the Wisconsin shore at points and equally close to the Minnesota shore at other points. Consequently, the extent of Wisconsin residents' riparian ownership of the bed would vary, depending on the location of their abutting land. Bed ownership of Lake Michigan as a natural lake is in the bordering states. State v. McDonald Lumber
IV. Determining the Ordinary High-Water Mark

A. What to look for when making an OHWM Determination

1. Biological Indicators:

   a. **Mosses**: mosses which are located on exposed rocks, stumps, tree roots, etc., are usually considered terrestrial and the lowermost elevation of these mosses is a good indicator of the OHWM. Some water mosses (e.g. Drepanoclados) form long strings and are aquatic and should not be used as indicators of the OHWM.

   b. **Lichen**: use these indicators with care for determining the OHWM. Use them mainly for recent, relatively short duration high water stage indicators. Extended high water periods eventually will kill and remove various lichen. Types to look for:

      1. **Coarse brown lichen** - usually lie above extreme high lake stages.
      2. **Black** - usually removed readily by water inundation.
      3. **Orange Lichen** - intermediate in their susceptibility to water destruction.
      4. **Green Lichen** - the lower most elevation of this lichen can indicate the highest water mark in recent years.

   c. **Trees**: the roots of living trees and shrubs along the shoreline will turn up and away from the water. Exposed bases and roots of older trees with roots growing primarily toward the shoreland on a horizontal plane are usually just above the OHWM if no slumpage has occurred.

      1. **Water roots**: Willow trees on the bank will put out red-brown water roots. The start of the water roots will be very near the OHWM. Beware of slumpage.
      2. **Pancake roots**: Birch, maples, tag alder and tamarack will form pancake shaped root mats usually just above the OHWM. Beware of slumpage.
      3. **Pipe elbow roots**: Birch and maple will curve their roots away from water forming a pipe elbow bend. The bottom of the root as it bends away will be very near the OHWM. Beware of slumpage.

   d. **Pollen**: pollen - especially pine pollen - often leaves marks on shore (particularly on large rocks) during spring and early summer. Not an indicator when considered by itself but will indicate recent high-water stages.

   e. **Large Cattail Mat**: The top of large cattail mats are often slightly above OHWM. Be careful of hummocks, floating bogs and mats, but be aware of where they exist in relation to your determination site.

   f. **Algae stain**: On rocks, stumps, etc. look for algae stain lines. On some rocks etc. it is possible that
you find an algae/lichen stain line. Algae marks should not be used as the sole basis for an OHWM determination. Because of high water stages and wave splash algae can grow above the OHWM.

2. Physical indicators: [other easily identified characteristics]
   a. **Ice Scars**: on trees, soil, etc. Ice marks are usually above the OHWM. Caution prevails in using these, because floods, wind and/or ice expansion can cause ice marks well above the OHWM. They are a good indication of the proximity of the OHWM and can help in a final determination.
   b. **Erosion** (from wave wash): try using small bays where large waves from high winds would not wash above the OHWM.
   c. **Mudstains and debris**: Mudstains on trees, stumps, rocks, etc. give a good indication of the proximity of the OHWM. The OHWM will usually be located below the mudstains and debris.
   d. **Water stains on rocks, culverts, seawalls, etc.**: Water stains on fixed objects are excellent indicators of the OHWM. Generally there will be three stain lines on the object (from the bottom) a gray band, a band of lighter color, and then another band of gray or black. The OHWM is located at the line between the lighter color band and the top dark band.
   e. **Leachate marks in the soil**: Dig into the immediately adjoining shoreland. Long-term water levels will sometimes leave stain marks in light colored soils known as mottling. Iron is the main coloring substance of the subsoil. Air is absent or in short supply when soils become saturated or nearly saturated with water. When air is absent in the soil, iron exists in the reduced state which is gray in color. When an air supply is present as in well drained soils, the iron is in an oxidized state which is yellowish or reddish in color. Imperfectly and poorly drained soils are nearly always mottled with various shades of gray, brown and yellow, especially within the zone of fluctuation of the water table. Some mottled colors occur unassociated with poor drainage past or present, therefore, such stains should be carefully compared with other indicators. Remember the highest past water level is not necessarily the OHWM.
   f. **Change in soil types**: Dig into the soil or take cores looking for a change from organic (peat-muck) to mineral soils. Although a soil developing under water may have a high mineral content (usually from water or wind born addition) a soil with a high or exclusive content of organic matter cannot form under well-drained conditions. The presence of a peat or muck profile is therefore a good indicator of a water level that is perpetually at or above the soil surface and thus of an OHWM.

B. **Additional considerations**

1. **Cattails**: don't use cattails as sole indicators of the OHWM. Cattail is a clone plant that can be found above and below the OHWM. It is extremely tolerant to extremes in water conditions.
2. **Water crawfoot**: extremely tolerant of dry conditions, similar to cattails.
3. **Steep, cliff areas**: avoid steep cliff areas because slumpage of terrestrial vegetation will undoubtedly occur.
4. **Disturbed areas**: avoid disturbed areas because OHWM indicators will probably be destroyed or absent. If necessary, determine the OHWM elsewhere and transfer the elevation of the OHWM to the disturbed area.
5. Wave windrow areas: avoid wave windrow areas because aquatic and terrestrial vegetation may be smothered by wave carried materials (sand).

6. Trapped water: areas where water is trapped by ice ridges, etc., can indicate an elevated OHWM.

7. Pollen, algae marks as the sole basis: such marks are usually located above the OHWM. Pollen, especially pine pollen, often leaves yellowish marks particularly on large rocks during spring and early summer.

8. Averaging elevations of OHWM determinations. Individual determinations at the same location should be within 0.1 ft. in elevation. Do not average elevations.

9. Winds can cause increased water elevations at ends of long lakes. You may have to return on a calmer day to make an accurate determination of water level with reference to a benchmark. Water levels on the opposite sides of lakes elongated especially in an east and west direction could be effected by prevailing winds. There is therefore a possibility that the OHWM on the east and west ends of such lakes may be at different elevations. If you suspect this to be the case, level work should be tied into U.S.G.S. benchmarks or other reliable datum.

10. On lakes or flowages which are controlled by a dam, be wary of drawdowns, erratic level control operations, broken or missing flashboards, etc., that have or could affect water levels and thus the OHWM.

11. When you have a body of water with an inflow and/or an outflow one of the first things to do in an OHWM determination is to check these locations to see if there are any unusual conditions that could affect your conclusions such as blockages of the inlet or outlet, broken flashboards on the outlet dam, etc. It is also a good idea to tour most of the shoreline and note undisturbed areas before proceeding. If a map of the water body is available, these areas should be marked on the map for further investigation.

12. Remember the highest past water level is not necessarily the OHWM. Whenever possible existing past data on water level reading should be consulted in the determination of the OHWM.

13. Court decisions usually involve the question: could a prudent person have reached the same conclusion as you did in your OHWM determination?

V. How to Locate and Document the OHWM

1. Ordinary High-Water Mark determinations are to be made according to the definition in Diana Shooting Club vs. Hustig 156 Wis. 261 (1914).

2. Check district and area files for previous OHWM determinations on the same waterbody. Also check all existing past water level readings.

3. Determine the OHWM using the physical and biological features (indicators) previously identified. Measure the distance of the indicators above or below the water level on the day(s) of observation. The water level on the day(s) of observation should be referenced to an easily identifiable benchmark (one method is to measure down from a culvert or wall to the water level). This benchmark (a measurement spot) should be carefully described and its exact location recorded in writing on the checklist, so that it can be found with ease at a future date if needed.

4. Find another spot near your first measurement and repeat the process. Take an adequate number of
measurements and notes before reaching a conclusion. Elevations of OHWM indicators should generally be within 0.1 feet of each other.

5. You should tie the OHWM elevation into a benchmark of known elevation. The checklist has a space for the elevation of the OHWM. This information could be especially useful when it is necessary to transfer the elevation of an OHWM to an area where there is no distinct mark. The checklist could be consulted to see if there are any OHWM determinations near the site where there was no mark. Then pursuant to Diana, the elevation can be transferred to the site where an OHWM determination is needed.

6. If early aerial photographs or maps of the area exist, they will serve as excellent evidence to support the location of a former shoreline which existed prior to disturbance. You can locate these through local Soil Conservation Services (SCS) offices, the Tomahawk DNR office and the Department of Transportation's Highway Testing Lab in Madison.

7. If you need assistance after exhausting district resources contact the Water Regulation Section.

VI. Educational Materials

There are three pamphlets produced by the Department which should be useful in educating the public on the OHWM and Wisconsin water law:

Wisconsin's Water Regulation Programs Work for You provides a general outline of water regulation permit program.

Public or Private I - Navigability discusses the concept of navigability and how it affects private rights.

Public or Private II - The Ordinary High-Water Mark discusses the relationship of the OHWM to private and public rights.

v:\perm\wz91605i.djd
SUBJECT: Distinction Between the Terms: "Ordinary high-water mark", "Normal high-water elevation", and "High Water Mark".

1. Are the terms "normal high-water mark" and "ordinary high-water mark" synonymous? If so, why was "normal" changed to "ordinary" in Chapter 330, Laws of 1981?

As used in s. 59.971, 1979, Stats., the phrase "normal high-water elevation" is synonymous with the phrase "ordinary high-water mark." The Department has consistently interpreted the phrase "normal high-water elevation" in s. 59.971 to mean the same as "ordinary high-water mark," and the Wisconsin Supreme Court has never indicated (or even hinted) that "normal high-water elevation" is something different than "ordinary high-water mark" (either before or after the enactment of Chapter 614, Laws of 1965, which created s. 59.971, Stats.)

We have no idea why the drafter of Chapter 614, Laws of 1965 (which created s. 59.971) used the phrase "normal high-water elevation" in s. 59.971 in the first place, since the Wisconsin Supreme Court has used the terminology "ordinary high-water mark" consistently since 1911, when the term was first defined in Lawrence vs. American Writing Paper Company, 144 Wis. 556 (1911). It seems reasonable to assume thereby the reasons for changing "normal" to "ordinary" (and "elevation" to "mark") in Chapter 330, Laws of 1981, were:

   a. To make the statutory language identical to the terminology used by the Wisconsin Supreme Court; and

   b. To avoid confusion with the concept of mean (or average) water level which is sometimes described as the "normal stage of water" or the "normal water elevation." See, for example Polebitzke vs. John Week Lumber Company, 163 Wis. 322, 325-326 (1916).

2. What is the distinction between "ordinary high-water mark" and "high watermark"? If there is no distinction, is the statute language flawed?

There is a distinction between the concept of "ordinary high-water mark" and the concept of "high watermark" (or "high-water mark"). However, there may be no practical distinction when it comes to applying the two concepts to a particular body of water at a particular time. "Ordinary high-water
"mark" is defined in State vs. McFarren, 62 Wis. 2d 492, 498 (1974) as "the point on the bank or shore up to which the presence and action of water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation, or other easily recognized characteristic."

The phrase "high watermark" (or "high-water mark") refers to the mark left by flood waters or several years of high groundwater causing the water level to increase to a substantially higher level.

Glacial pothole lakes were apparently singled out for special treatment in s. 59.971 because these high water levels in glacial pothole lakes usually remain above the lower "ordinary high-water mark" for several years or more. It was intended that shoreland zoning should apply to areas within 1000 feet of the "high watermarks" of these glacial pothole lakes because often the lower "ordinary high-water marks" would be inundated and could not be located. After the floodwater or groundwater stabilizes to a constant elevation, there should be no difference between this elevation and the ordinary high-water mark.

As a reminder, one should be aware of the fact that a body of water need not be a glacial pothole for this situation to occur on. Many lakes in this state are subject to substantial fluctuations in their water level to the extent that new ordinary high water marks are established. The fact that glacial potholes are specifically mentioned in the statute is because they are typically more prone to these fluctuations than other lakes.
TO: District Directors
FROM: Robert W. Roden - WRZ/5
PMMS Response
Put in: Chapter 40, Water Regulation Handbook

SUBJECT: Operation of Motor Vehicles in Water Prohibited

We have been asked if operation of a motor vehicle upon the exposed bed of a lake or stream under low water conditions is a prohibited activity under section 30.29 Wis. Stats.

Section 30.29(2) states no person may operate a motor vehicle in any navigable waters of the state with the exceptions identified in 30.29(2). Review of the Legislative history of 30.29 shows that the term in any navigable waters is meant to include the bed of any water of the state below the OHWM. Therefore, operation of a motor vehicle on the exposed bed below the OHWM, subject to the exceptions of 30.29(3), could be regulated under 30.29(2) and the operator subject to enforcement and penalty under 30.29(4).

It should also be noted that State v. McFarren (1974) 62 Wis. 2d 492, points out:

A riparian owner has a qualified right to the land between the actual water level and the ordinary high water mark; he may exclude the public therefrom but may not interfere with the rights of the public for navigable purposes.

Therefore, any operation of a motor vehicle upon the exposed bed of a lake or stream would be subject to the consent of the affected riparian owner(s). Riparian owners may deny access to the exposed bed and prosecute an operator for trespass if they so desire. They may not, however, deny access by the installation of a fence or similar physical structure constructed or placed below the ordinary high water mark unless a permit has been issued under 30.12.

Reviewed By: John Coke
Scott Hausmann
Mike Cain
Upon further discussion with the Bureaus of Legal Services and Law Enforcement concerning the legislative history of ss. 30.29, it has been determined that the June 14, 1984, memo on this subject was in error. Therefore, the June 14, 1984, memo on this subject is hereby rescinded and is to be replaced by the following:

Section 30.29(2), Statutes, states no person may operate a motor vehicle in any navigable waters of the state with the exceptions identified in ss. 30.29(3). The legislative intent in using the term "in any navigable waters" was to specifically exclude regulation of motor vehicles on the exposed beds. Therefore, as long as the vehicle is not actually operated in the water, such activity would not be regulated under ss. 30.29.

It should also be noted however that State v. McFarren (1974) 62 Wis. 2d 492, points out:

   A riparian owner has a qualified right to the land between the actual water level and the ordinary high watermark; he may exclude the public therefrom, but may not interfere with the rights of the public for navigable purposes.

Therefore, any operation of a motor vehicle upon the exposed bed of a lake or stream would be subject to the consent of the affected riparian owner(s). Riparian owners may deny access to the exposed bed and prosecute an operator for trespass if they so desire.

Reviewed by: John Coke
Scott Hausmann
Mike Cain
Dale Morey
DATE: May 15, 1985

TO: District Directors

FROM: George E. Meyer - AD/5

PMMS Response
Insertion: Chapter 40, Water Regulation Handbook

Distribution: Program Staff
All Conservation Wardens

SUBJECT: Operation of Motor Vehicles in Water Prohibited

We have been provided with additional information that indicates the July 30, 1984 memo on this subject was in error. The original proposal to create section 30.29, Wis. Stats., prohibited operation of a motor vehicle "in the waters of the state or on the bed of any water of the state below the high water mark." Section 30.29(2) now states "in any navigable waters of the state." Our previous memo of July 30, 1984 was based on information that the reason for the change in section 30.29(2) was to exclude regulation of vehicles operated on exposed beds. We have now been informed that the reason for the change to drop "on the bed..." was simply due to the fact that the term "in any navigable waters" includes the exposed bed below the ordinary high water mark and the original wording was simply repetitious.

Therefore, our policy shall be that operation of a motor vehicle on the exposed bed below the OHWM, subject to the exceptions of 30.29(3), is regulated under 30.29(2) and the operator subject to enforcement and penalty under 30.29(4).

It should also be noted that State v. McFarren (1974) 62 Wis. 2d 492, points out:

A riparian owner has a qualified right to the land between the actual water level and the ordinary high water mark; he may exclude the public therefrom but may not interfere with the rights of the public for navigable purposes.

Therefore, any legal operation of a motor vehicle upon the exposed bed of a lake or stream under the exceptions identified in 30.29(3) would be subject to the consent of the affected riparian owner(s). Riparian owners may deny access to the exposed bed and prosecute an operator for trespass if they so desire.

Reviewed By: John Coke
Scott Hausmann,
Mike Cain
Dale Morey

JC:slh
6421K
To: Water Management Coordinators  
Water Management Specialists  
Water Regulation Staff  

From: Dale Simon  

Subject: Ordinary High Watermarks  

Attached for your information and use is a brief explanation of issues relative to ordinary high watermark determinations.

Hopefully the plant species list will assist you in your OHWM determinations. Eventually each district will have a list of plant species most commonly found in your geographic region.

If you would like to add to this list, please send your information to me. Please contact me if you have any questions.

DS:el  
Attach.

cc: Bob Roden/Scott Hausmann - WZ
Public waters subject to state public trust responsibilities are those lakes, ponds, flowages, rivers, streams and associated enlargements declared navigable under s. 30.10, Wis. Stats. These public waters are by the Wisconsin Constitution held in trust by the state for the benefit of all of its citizens.

The limits within which these water bodies are held in trust by the state extend from the open water, landward to the ordinary high water mark (OHWM). The OHWM is the point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation or other easily recognized characteristic. Diana Shooting Club v. Husting (1914), 156 Wis. 261, 272. The land between the waters edge and the OHWM need not be navigable in fact to be protected under the public trust. If the land is part of a navigable lake, then the fact that the specific area cannot be navigated is irrelevant to the state’s claim. Lakebed may be heavily vegetated by plants rising far above the water. State of Wisconsin v. Trudeau, 139 W. 2d 91 (1987).

Ownership of the beds of public waters vary significantly, but state public trust responsibilities remain paramount regardless of bed ownership. The beds of all rivers and streams are owned by the adjacent riparian to the middle of the stream thread. The beds of all natural lakes are owned by the state up to the OHWM. Riparian owners of property adjacent to natural lakes, rivers and streams have exclusive use and some privileges of the exposed lakebed not otherwise afforded the public. Regardless of ownership, access to public waters must be gained legally. If the property surrounding a natural land locked lake were owned by one person then access to the lake could be achieved by obtaining the landowner’s consent or in limited instances flying into the lake with a sea plane. Access to a public river or stream must be gained from the riparian owner or via another public access such as from a public boat landing or in many instances from a public highway that traverses the river or stream.

Considerations prior to making an OHWM Determination
1. The ultimate decision you make should, whenever possible, meet the "reasonable-prudent test". Could a prudent person come to the same conclusion as you. However, there will be situations where even the prudent person test will not apply (usually large rivers and lakes with high energy factors or where there are contiguous wetland complexes regardless of the size of the waterbody or energy factor.)

2. What kind of documentation will you rely upon to verify your determination? (Plants, water stains, wash marks, etc.) How can someone else verify the location of the OHWM? Will you take photos? Do you need a survey and benchmarks? How and where will you retain a record of your determination? What information should I have in the file that constitutes adequate documentation?

3. Can you defend your determination in court? OHWM determinations should be sufficiently documented with field observation notes, photographs, survey notes etc., to support your conclusions. Documented OHWM determinations can be included in the comments section of the Chapter 30/31 data base and a hard copy with your exhibits should be filed in your water body files where you keep lake maps, surface water resource publications, water level records or similar archives that should be in your office. Another option is to place a copy of your documentation with the waterbody files that are maintained by fisheries management for fish surveys and the like.

It is common to have physical and biological evidence of more than one OHWM, particularly on land locked lakes with no outlet, frequently flooded waterbodies and waterbodies with high energy forces. OHWM determinations should also be able to stand the test of time. A question you should always ask and answer yourself is have recent hydrologic events (major storms) created OHWM indicators that are not indicative of long term conditions (20 or more years).

4. Department liability. As a representative of the state, you make a decision that carries great weight. Not only in the sense of determining public and private rights and ownership, but your decision is also a potential liability to the state. Legislation allows one who is regulated to recover costs and damages for invalid determinations where the judicial system finds the state has erred (see s. 227.115, Stats.). In other words, mistakes can be costly.

5. Are you dealing with an altered body of water? Is it a flowage, perched lake or a stream with beaver problems? What has the average annual precipitation been in the past?
What is it for the existing year? Are water levels too high (e.g., spring)? Is the waterway frozen (this can have a significant bearing on floating bogs)? All of these factors and more can have a bearing on your ultimate OHWM determination. What time of the year did you make your determination?

Water marks similar to OHWMs can be established in a short period of time. Rely upon OHWM indicators that reflect a long time period. An ordinary high water mark that is indicative of the longest time period will generally be the easiest to defend.

The recommended procedure for determining an OHWM is to identify mature woody upland vegetation and work your way waterward. As you progress waterward you will find transitional plants (plants found above and below the OHWM) and aquatics (plants almost always found below the OHWM). Fine tuning of an OHWM can be accomplished with physical indicators. Those generally being wash marks, water stains and soil conditions (gleyed, mottled, redoxomorphic). These procedures should be repeated on the same water body at various locations to verify your original determination (multiple indicators work fine on ponds and lakes (with exception to very large water bodies). OHWM indicators on rivers and streams must take gradient into account as the OHWM changes in elevation with the gradient. Consistent multiple determinations will contribute to your credibility and ability to defend your final decision. Although you cannot use only water level records for the basis of your determination, this data can be used to support or validate your decision. The same holds true for historic photographs and other ancillary data.

Multiple Ordinary High Watermarks - "The Dilemma"

Occasionally you will find yourself in the situation of deciding which one of several distinguishable OHWM indicators are the right ones. The primary factor governing your decision should be which OHWM stands the test of time in combination with your confidence and ability to defend your determination. Secondary factors affecting your decision would include parameters generally associated with public interest values such as fishing, swimming, navigation, flora and fauna and associated habitat, etc. An OHWM that provides protection to these public values can be used in your defense of an OHWM determination. That is not to say that public interest values should dictate your decision, the criteria in Diana dictates your decision, however one can effectively argue public interest benefits associated with your determination versus a lower OHWM that does not include those public benefits.

Regardless of where your determination is finally selected, it is just as important for you to be able to explain why you didn’t select the other OHWM indicators. This helps explain your scientific reasoning and will only add credibility to your final
Problem Areas

As previously indicated, the prudent person test should be applied to OHWM determinations. However there are exceptions to the prudent person test. Generally, the prudent person test does not work for jurisdictional determinations where one is evaluating a pond/lake/deepwater marsh that may or may not have standing water present throughout the year. Another difficult determination is where you have either a river/stream/lake, particularly bog lake, with contiguous wetlands adjacent to the open water that can extend a great distance from open water to upland. Other situations where the prudent person test doesn't fit well is on waterbodies with extreme energy forces such as Lake's Michigan and Superior and the Mississippi, St. Croix, Chippewa and Wisconsin Rivers to name a few. We'll take a closer look at these potentially difficult situations.

Hydrology and Energy

The hydrology of waterbodies (ponds, lakes, deepwater marshes) can be driven by a variety of factors, depending on whether or not the waterbody is a drainage lake, seepage lake, spring lake or drained lake. Drained lakes are those most likely to fall under this difficult category. That is primarily due to the facts that their hydrology is driven by precipitation, land use and evapotranspiration. These systems are frequently freeze-out lakes lacking a fishery, but have significant wildlife value including, but not limited to, waterfowl, shorebirds, amphibians and reptiles. These systems have major precipitation inputs during the spring and fall with an occasional input during the summer but have a tendency to become extremely shallow in late summer or sometimes even dry up during periods of drought.

When standing water is not present in a drained lake there should be areas within the dried lakebed that are lacking any vegetative cover surrounded by areas of persistent hydrophytes. The areas lacking vegetation are those that normally have standing water present throughout the growing season and are of sufficient depth to support the non-persistent aquatics such as coontail, bladderwort or pondweed. The observations combined with other historic information help one establish the basis that we are first dealing with a public waterbody.

The next step in determining the OHWM in these systems is to start at the upland and work your way waterward looking for observations such as the presence or absence of woody vegetation, wash marks, water stains, hummocks, adventitious roots, buttressing of woody plants and other characteristics normally employed in a OHWM determination. Once the OHWM is identified this elevation should be surveyed in to a permanent benchmark whenever possible. Then the elevation of the OHWM can be transferred around the perimeter of the waterbody for purposes of
zoning setbacks or chapter 30 permit requirements when appropriate. Large water bodies having great energy factors will result in varying OHWM elevations and should be determined independently for each site along the shoreline where the energy forces vary.

Another problem area where the prudent person test generally does not work is when you're dealing with an aquatic system that has vast quantities of wetland complexes contiguous with the waterbody. This type of a system can occur with any aquatic environment but is usually prevalent with larger riverine complexes, flowages, and any of the lake types previously mentioned. The most common system exhibiting these characteristics are the bog lakes in northern Wisconsin.

The bog lakes and associated aquatic plant communities can expand vastly making an OHWM determination not only difficult but extremely time consuming. A few of the common problems associated with these systems are anchored and floating vegetative mats, substrate (mineral vs organic), and hyrology. Are the aquatic plant communities present because of the surface water in the bog or are the plant communities not associated with the lake but rather groundwater discharge or the water table. Many of the smaller bog lakes have floating vegetative mats around the perimeter of the open water where they abut upland or they have a perimeter of open water adjacent to the upland with a floating vegetative mat in the center of the lake. These bog lake systems are relatively easy to document the OHWM using conventional methods mentioned earlier. Other bog lakes aren't as easy to determine the OHWM relative to the wetlands contiguous with the lake. Under these circumstances, the use of surveying equipment, a soils probe or sharpshooter are essential tools that will help you pinpoint the location of the OHWM within or adjacent to the aquatic vegetative complex.

If you're fortunate enough to have an exposed shoreline lacking a bog complex in front of it, that will be the general location to select your OHWM. Certain circumstances will require you to locate the OHWM off site and transfer that elevation to the desired location with the use of surveying equipment (Remember transferring OHWM elevations from one site to another has been determined by the courts to be an acceptable method. State v. McDonald Lumber Co., Inc., 18 Wis.2d 173 (1962)). This may be due to disturbances caused by man induced activities or the force of nature. Regardless select sites that are stable. Remember when transferring elevations avoid the use of the lake's surface water elevation as a turning point unless you know weather patterns are relatively stable and your survey will take a short period of time to accomplish (less than one hour). External forces can create a seiche (An oscillation of the water in a lake, bay, etc., caused by changes in barometric pressure, seismic disturbances, winds or waves, etc. Take the time to do a little more research into seiches, it's a fascinating subject.) that can alter the elevation of the lake surface within a
relatively short period of time. Therefore using the lake surface water elevation as a survey turning point can induce elevation errors into your survey.

When transferring your OHWM elevation back into the bog complex, one should constantly be checking a few items in particular. The first is to determine if the bog is floating or anchored and then probe through the bog in search of terra firma, generally sand, densely compacted peat or muck. Take note of the distance between terra firma and the lowest point on the surface. When taking water levels within the bog, stand as far as possible away from the stadia rod to avoid false water level elevations that can be created by your weight while standing next to the rod. Surface elevation on the bog mat should be taken at the lowest level since the vegetative surface of the bog is undulating. Continue this process in a landward direction until you have come to the point where the elevation of terra firma and your OHWM elevation are relatively the same. This location would be the maximum lateral extent of the OHWM. Substantiate your determination with the vegetation (remember the standard in Diana that point up to which upland vegetation is destroyed). One reason why you are documenting terra firma is to ensure that the contour of the substrate is below the elevation of the OHWM. This will also help corroborate the hydrophytic vegetation present is associated with the lake and not groundwater.

Lastly let's venture into aquatic systems that really have a significant energy component associated with them. In particular we will address the great lakes of Superior and Michigan and large riverine systems such as the mighty Mississippi and any other riverine system that is utilized for hydropower.

We've mentioned seiches before and its potential affect on water levels. As previous mentioned seiches may be a result of a change in barometric pressure. For example a seiche in Green Bay caused by a significant change in barometric pressure can cause the water level to fluctuate by as much as two feet in a matter of hours. Seiches, specifically those associated with a change in barometric pressure may cause changes in surface water elevations but their relationship to the OHWM is extremely limited. Seiches associated with wind waves have a very strong relationship with the OHWM. Fetch, wind velocity and direction of wind are very critical components that determine where the presence of water is so continuous that it creates the OHWM. OHWM determinations for Lakes Superior and Michigan should be established along shorelines where there is some protection from high energy forces. For example, the ten year storm event can create what would appear to be the ordinary high water mark along the shoreline because there will be a very distinct wash mark and vegetation line. However the wash mark created by this storm event is a result of an event that may only happen once every ten years and is therefore not normal or ordinary. The stability of the shoreline will dictate where you make your determination. Avoid sandy shores where possible. In some locations the lack of
upland vegetation is attributed to wind action and not wave action. Remember we're making a determination based upon what was created by the presence of water (wave action) on a fairly routine basis. Because of the energy forces associated with Lakes Superior and Michigan, these are probably the two most difficult waterbodies to determine an OHWM.

Large riverine systems such as the Mighty Mississippi and the St. Croix have several other energy components that influence the OHWM. Ordinary high water marks are generally established by the presence of water or wave action at an given elevation for a minimum of 30-70 (not necessarily consecutive) days a year, over a twenty year period. Keep in mind the Mississippi River is a controlled system, a series of locks and dams that are managed primarily for commercial navigation and flood control. Generally, during ice out in the spring through parts of June the water levels within each pool are normally held above flat control pool. These sustained periods of higher water levels combined with commercial and some recreational navigation have the greatest influence upon establishing the OHWM. The variability is directly attributed to management, use and position in the landscape. The pools lower in the system are first to thaw, first to be used for commercial navigation and play a more important role in flood control since they receive more water from the landscape. They will have a higher OHWM above flat control pool than pools located further upstream in the system.

Riverine systems utilized for hydropower are another rather unique ecosystem whose OHWM is primarily dictated by people management. Many of our large riverine systems were damed in the earlier part of the 20th Century for the purpose of producing electricity. Those hydropower dams were operated as peaking systems whereby during the night water is held back in the flowage with very little flow being released and during the day when energy demands were higher substantial flows would be pass through turbines to generate electricity. This peaking operation would cause water level fluctuations in the flowage as well as the river downstream from the dam. The greatest fluctuation in level being the river downstream. These fluctuations would occur on a daily basis and thus the OHWM would then be determined by the highest flow passed on a regular basis as would the highest operating water level in the flowage. We've come a long way since the early 1900's and have in recent years began to understand the detrimental environmental impacts associated with a peaking operation. Most of our larger hydropower dams are no longer operated as a peaking system but rather as a run of river system (e.g. what goes in to the flowage goes out of the flowage). This flow regime mimics best would might occur under natural conditions. As a result, flows released through the dams are more uniform than a peaking operation and generally lower in flow and elevation. Therefore, riverine systems that are utilized for hydropower and that have since changed from a peaking to a run of river system will have remnants of an old
OHWM higher than what the modern day OHWM currently is. The bottom line, do your homework, investigate the historical use of a riverine system and understand how that may or may not influence your OHWM determination. Always remember it is just as important for you to explain why you selected the OHWM indicators you did as well as those you didn't.

**Using Vegetation Indicators**

Plant species can often be very useful in determining your OHWM. Some species are almost exclusively found above or below the OHWM. However, many wetland species are capable of growing in either position. The main consideration when deciding whether to include vegetation as a major factor in your determination is whether the plant species or community is associated with a lake, pond or stream or whether the plants may be growing within a wetland unconnected to another surface water. The wetland may be contiguous and even discharging flow to a waterbody, but it may be elevated above the OHWM. Often, groundwater discharge wetlands which experience almost constant saturation may build organic matter above the OHWM of adjacent waterbodies. These wetlands may be located below the OHWM if they flood for a significant period of time.

The following list of plants are indicators that you can use in your OHWM determinations. As time progresses this list will expand. If you have additional species that you would recommend we add to the list, please share your information. Information about these and other Wisconsin vascular plant species can be found at the UW - Wisconsin State Herbarium web site at: http://wiscinfo.doit.wisc.edu/herbarium/.

**Plants Generally Found Below the OHWM (Not inclusive)**

If you are in an area adjacent to or connected to a lake or stream and aquatic plants are dominant, you are almost certain to be below the OHWM. Aquatic plants tolerate long periods of inundation, although they can survive short-period (1 week or less) dry-downs on an annual basis. Deep and shallow marshes may also be directly connected to lakes and streams. If you are in a wetland adjacent to a lake or stream and encounter the plants listed here or others which are designated as "obligate" wetland plants on the USFWS's "National List of Plant Species that Occur in Wetlands" (Indicator List), this area is generally below the OHWM. Listed below are the aquatic, semi-aquatic and marsh species you will commonly encounter in areas below the OHWM.

**Aquatics**
Armoracia lacustris  Lake cress
Callitrichce spp.  Water starworts
Ceratophyllum demersum  Coontail
C. echinatum  Coontail
Chara spp.  Muskgrasses
Elatine minima, E. triandra  Waterwort
Elodea canadensis, E. nuttallii  Waterweed
Eriocaulon aquaticum  Pipewort
Isoetes spp.  Quillworts
Litorella uniflora  Plantain shoreweed
Lobelia dortmanna  Water lobelia
Megalodonta beckii  Water marigold
Myriophyllum spp.  Water milfoil
Nasturtium officianale  Watercress
Najas spp.  Slender naiad
Nitella spp.  Nitellas
Potomogeton spp.  Pondweeds
Ranunculus aquatilis  Water crowfoot
R. flabellaris  Water crowfoot
R. gmelinii  Water crowfoot
Ruppia cirrhosa  Ditch-grass
Sparganium spp.  Bur-reed
Utricularia spp.  Bladderwort
Vallisneria americana  Wild celery
Zannichellia palustris  Horned pondweed
Zosterella dubia  Water stargrass

1 Potamogeton gramineus may also occur on wet shores.

Floating-leaf Aquatic Plants

Brasenia schreberi  Watershield
Lemna spp.  Duckweeds
Nelumbo lutea  American lotus
Nuphar spp.  Yellow pond-lily
Nymphaea odorata  White water-lily
Polygonum amphibium  Water smartweed
Riccia fluitans  Slender riccia
Spirodela polyrrhiza  Giant duckweed
Wolffia spp.  Watermeal

2 Polygonum amphibium will also move out onto wet shores.

Marsh Species & Semi-Aquatics

Alisma spp.  Water-plantain
Dulichium arundinaceum  Three-way sedge
Eleocharis acicularis  Needle spikerush
Iris spp.  Iris species
Phragmites australis  Common reed grass
Pontederia cordata  Pickerel weed
Floodplain Forests and Hardwood Swamps

Streams may have floodplains which flood regularly enough to meet the criteria for areas below the OHWM. For an area to be considered below the OHWM, it must be inundated for a sufficient period of time (at least 30 days, not necessarily consecutive). Woody vegetation generally does not tolerate long-duration flooding without stress which may result ultimately in death. However, some species have adapted to tolerate saturated root zones for various lengths of time. For example, when silver maples (Acer saccharinum) are actively growing they may be able to tolerate seasonal flooding but its relative sugar maple (Acer saccharum) cannot. Flooding often occurs in late winter or early spring when trees are still partially dormant. Flooding for shorter duration in the height of the growing season may not cause significant stress to the plants.

Old lacustrine basins may flood regularly and of sufficient duration to develop an OHWM. Hardwood swamps may develop in these basins and all or parts of these wetlands may be below the OHWM.

Use caution when using plants to determine the OHWM in floodplain forests and hardwood swamps. Aquatic plants are generally found below the OHWM, but many of the dominant species are trees, shrubs and forbes which are only seasonally inundated. These species can generally occur both above and below the OHWM. In these areas it is crucial that you either use documented hydrology data, erosion marks or other hydrology indicators to verify your OHWM determination.

Floodplain Forest and Hardwood Swamp Species

<table>
<thead>
<tr>
<th>Plant Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acer rubra</td>
<td>Red maple</td>
</tr>
<tr>
<td>Acer saccharinum</td>
<td>Silver maple</td>
</tr>
<tr>
<td>Betula nigra</td>
<td>River birch</td>
</tr>
<tr>
<td>Carex spp.</td>
<td>Sedge species</td>
</tr>
<tr>
<td>Celtis occidentalis</td>
<td>Hackberry</td>
</tr>
<tr>
<td>Fraxinus nigra</td>
<td>Black ash</td>
</tr>
<tr>
<td>F. pennsylvanica</td>
<td>Green ash</td>
</tr>
<tr>
<td>Laportea canadensis</td>
<td>Wood nettle</td>
</tr>
<tr>
<td>Matteuccia struthiopteris</td>
<td>Ostrich fern</td>
</tr>
</tbody>
</table>

Sagittaria latifolia Arrowhead
Schoenoplectus acutus Hard-stem bulrush
S. pungens Three-square bulrush
S. tabernaemontani Soft-stem bulrush
Sium suave Water parsnip
Sparganium americanum Bur-reed
S. eurycarpum Bur-reed
Typha angustifolia Narrow-leaved cattail
T. latifolia Broad-leaved cattail
T. X glauca Hybrid cattail
Zizania aquatica Wild rice
Populus deltoides  Eastern cottonwood
Quercus bicolor  Swamp white oak
Rudbeckia laciniata  Cut-leaved coneflower
Salix nigra  Black willow
Ulmus americana  American elm

Other Transitional Areas

Open wetland areas adjacent to waterways may be marsh, wet meadow, sedge meadow, fen or open bog plant communities. As with floodplain forests, you need to use caution when determining the OHWM. Most important is determining if the wetland is directly connected to the waterway or if there is a significant difference in the source of the hydrology. For instance, some wetlands may be adjacent to lakes or streams but may be fed by groundwater discharge that is essentially separate from the water feeding the lake or stream. These wetlands are often substantially above the elevation of the waterway, and also above the OHWM. Make sure that the wetland area is influenced by the waterway's hydrology on a regular basis. Also, if the area is dominated by drier end wetland community types such as wet prairie or wet meadow, the plants are not likely to tolerate a lot of water on their roots. These plant communities endure short-duration saturation but will not survive if the saturation or inundation lasts well into the growing season. There may be exceptions if the inundation occurs early or late in the growing season. As with floodplain forests, document your OHWM determination with hydrology data and additional indicators.

Sedge (Cyperaceae) and rush (Juncaceae) families include species often encountered both above and below the OHWM. Common genera of the sedge family include Carex (sedge); Eleocharis (spike-rush); Eriophorum (cotton-grass); Schoenoplectus, Bolboschoenus and Scirpus (bulrushes) and Cyperus (nut sedge). Rushes (Juncus) are also often found both above and below the OHWM. These families are notorious for their difficult taxonomy. Although many of the sedges are obligate wetland plants, there are also many species of sedges found almost exclusively in uplands. Although it would be difficult to impossible to learn to identify all of the sedges, knowing some common species can be critical in making both OHWM and wetland determinations. There are no absolutes, but there are some general rules of thumb for sedges. For instance, lake sedge (Carex lacustris) and aquatic sedge (C. aquatilis) will often be found growing below the OHWM. Also, the bottlebrush-like sedges (C. comosa, C. hystericina and C. pseudo-cyperus), tend to grow below the OHWM when found adjacent to waterways.

Transitional species are often those plants you will find listed on the Indicator List as FACW (67% to 99% of the time growing in wetlands). This indicates that the species has adapted to wet conditions. These species are good indicators that water is present for a significant period of time. However, look for
other indicators of long-term hydrology to substantiate your OHWM determination.

**Fen Species (found both above & below the OHWM, not inclusive)**

<table>
<thead>
<tr>
<th>Species</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aster firmus</td>
<td>Swamp aster</td>
</tr>
<tr>
<td>Bromus ciliatus</td>
<td>Fringed brome</td>
</tr>
<tr>
<td>Carex sterilis</td>
<td>Sterile sedge</td>
</tr>
<tr>
<td>Gentianopsis procera</td>
<td>Lesser fringed gentian</td>
</tr>
<tr>
<td>Lobelia kalmii</td>
<td>Kalms lobelia</td>
</tr>
<tr>
<td>Lycopus uniflorus</td>
<td>Northern bugleweed</td>
</tr>
<tr>
<td>Parnassia glauca</td>
<td>Grass-of-parnassus</td>
</tr>
<tr>
<td>Pedicularis lanceolata</td>
<td>Swamp lousewort</td>
</tr>
<tr>
<td>Pentaphylloides floribunda</td>
<td>Shrubby cinquefoil</td>
</tr>
<tr>
<td>Solidago ohiosensis</td>
<td>Ohio goldenrod</td>
</tr>
<tr>
<td>S. riddelli</td>
<td>Riddell's goldenrod</td>
</tr>
</tbody>
</table>

**Bog Species Found Both Above & Below the OHWM (Not inclusive)**

<table>
<thead>
<tr>
<th>Species</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andromeda glaucophylla</td>
<td>Bog rosemary</td>
</tr>
<tr>
<td>Betula pumila</td>
<td>Bog birch</td>
</tr>
<tr>
<td>Calla palustris</td>
<td>Water arum*</td>
</tr>
<tr>
<td>Carex oligosperma</td>
<td>Few-seeded sedge</td>
</tr>
<tr>
<td>C. pauciflora</td>
<td>Few-flowered sedge</td>
</tr>
<tr>
<td>C. magellanica</td>
<td>Boreal bog sedge</td>
</tr>
<tr>
<td>Chamaedaphne calyculata</td>
<td>Leatherleaf</td>
</tr>
<tr>
<td>Comarum palustre</td>
<td>Marsh cinquefoil</td>
</tr>
<tr>
<td>Cypripedium acaule</td>
<td>Moccasin flower</td>
</tr>
<tr>
<td>Drosera intermedia</td>
<td>Narrow-leaved sundew</td>
</tr>
<tr>
<td>D. rotundifolia</td>
<td>Round-leaved sundew</td>
</tr>
<tr>
<td>Eriophorum vaginatum subsp. spissum</td>
<td>Tussock cotton-grass</td>
</tr>
<tr>
<td>Eriophorum virginicum</td>
<td>Rusty cotton-grass</td>
</tr>
<tr>
<td>Gaultheria hispidula</td>
<td>Creeping wintergreen</td>
</tr>
<tr>
<td>Ilex mucronata</td>
<td>Mountain holly</td>
</tr>
<tr>
<td>Kalmia polifolia</td>
<td>Bog-laurel</td>
</tr>
<tr>
<td>Larix laricina</td>
<td>Tamarack</td>
</tr>
<tr>
<td>Ledum groenlandicum</td>
<td>Labrador-tea</td>
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<tr>
<td>Lycopus uniflorus</td>
<td>Northern bugleweed</td>
</tr>
<tr>
<td>Menyanthes trifoliata</td>
<td>Common buckbean</td>
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<tr>
<td>Sarracenia purpurea</td>
<td>Pitcher-plant</td>
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<tr>
<td>Sphagnum spp.</td>
<td>Sphagnum moss</td>
</tr>
<tr>
<td>Vaccinium angustifolium</td>
<td>Early low blueberry</td>
</tr>
<tr>
<td>Vaccinium macrocarpon</td>
<td>Large cranberry</td>
</tr>
<tr>
<td>Vaccinium myrtilloides</td>
<td>Velvet-leaf blueberry</td>
</tr>
<tr>
<td>Vaccinium oxyccoccos</td>
<td>Small cranberry</td>
</tr>
</tbody>
</table>

**Other Transitional Plants Found Above & Below the OHWM (Not inclusive)**

<table>
<thead>
<tr>
<th>Species</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Acorus calamus</td>
<td>Sweet flag*</td>
</tr>
<tr>
<td>Alnus incana subsp. rugosa</td>
<td>Tag alder</td>
</tr>
<tr>
<td>Asclepias incarnata</td>
<td>Swamp milkweed*</td>
</tr>
<tr>
<td>Aster simplex</td>
<td>Lowland white aster</td>
</tr>
<tr>
<td>Common Name</td>
<td>Scientific Name</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-----------------------------------------------------</td>
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<tr>
<td>Aster umbellatus</td>
<td><em>Aster umbellatus</em></td>
</tr>
<tr>
<td>Calamagrostis canadensis</td>
<td><em>Calamagrostis canadensis</em></td>
</tr>
<tr>
<td>Calopogon tuberosus</td>
<td><em>Calopogon tuberosus</em></td>
</tr>
<tr>
<td>Campanula aparinaoides</td>
<td><em>Campanula aparinaoides</em></td>
</tr>
<tr>
<td>Carex muskingumensis</td>
<td><em>Carex muskingumensis</em></td>
</tr>
<tr>
<td>Carex trisperma</td>
<td><em>Carex trisperma</em></td>
</tr>
<tr>
<td>Chamaedaphne calyculata</td>
<td><em>Chamaedaphne calyculata</em></td>
</tr>
<tr>
<td>Chelone glabra</td>
<td><em>Chelone glabra</em></td>
</tr>
<tr>
<td>Circuta maculata</td>
<td><em>Circuta maculata</em></td>
</tr>
<tr>
<td>Eriophorum angustifolium</td>
<td><em>Eriophorum angustifolium</em></td>
</tr>
<tr>
<td>Eupatorium maculatum</td>
<td><em>Eupatorium maculatum</em></td>
</tr>
<tr>
<td>Eupatorium perfoliatum</td>
<td><em>Eupatorium perfoliatum</em></td>
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<tr>
<td>Fraxinus nigra</td>
<td><em>Fraxinus nigra</em></td>
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<tr>
<td>Galium boreale</td>
<td><em>Galium boreale</em></td>
</tr>
<tr>
<td>Glyceria striata</td>
<td><em>Glyceria striata</em></td>
</tr>
<tr>
<td>Iris virginica var. shrevei</td>
<td><em>Iris virginica var. shrevei</em></td>
</tr>
<tr>
<td>Iris pseudacorus</td>
<td><em>Iris pseudacorus</em></td>
</tr>
<tr>
<td>Impatiens capensis</td>
<td><em>Impatiens capensis</em></td>
</tr>
<tr>
<td>Lathyrus palustris</td>
<td><em>Lathyrus palustris</em></td>
</tr>
<tr>
<td>Leersia oryzoides</td>
<td><em>Leersia oryzoides</em></td>
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<td><em>Lobelia siphilitica</em></td>
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<td><em>Mentha arvensis</em></td>
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<td><em>Phalaris arundinacea</em></td>
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<td><em>Phragmites australis</em></td>
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<td>Salix spp.</td>
<td><em>Salix spp.</em></td>
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<td>Viola cucullata</td>
<td><em>Viola cucullata</em></td>
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<tr>
<td>Valeriana edulis</td>
<td><em>Valeriana edulis</em></td>
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*Most often located below the OHWM*

**Plants More Commonly Found Above the OHWM (Not inclusive)**

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
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<tbody>
<tr>
<td>Abies balsamea</td>
<td><em>Abies balsamea</em></td>
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<td>Acer rubrum</td>
<td><em>Acer rubrum</em></td>
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<td>Apocynum androsaemifolium</td>
<td><em>Apocynum androsaemifolium</em></td>
</tr>
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<td>Apocynum cannabinum</td>
<td><em>Apocynum cannabinum</em></td>
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<td>Asclepias syriaca</td>
<td><em>Asclepias syriaca</em></td>
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<td>Betula lutea</td>
<td><em>Betula lutea</em></td>
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<td>Betula papyrifera</td>
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<td>Capsella bursa-pastoris</td>
<td><em>Capsella bursa-pastoris</em></td>
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<td><em>Cyripedium candidum</em></td>
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<tr>
<td>Daucus carota</td>
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*Plants More Commonly Found Below the OHWM (Not inclusive)*
<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
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<tbody>
<tr>
<td>Dryopteris cristata</td>
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<td>Erigeron annus</td>
<td>Daisy fleabone</td>
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<td>Euthamia graminifolia</td>
<td>Grass-leaved goldenrod</td>
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<td>Fraxinum americana</td>
<td>White ash</td>
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<td>Heracleum lanatum</td>
<td>Cow-parsnip</td>
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<td>Hypericum perforatum</td>
<td>St. John's-wort</td>
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<td>Juglans nigra</td>
<td>Black Walnut</td>
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<td>Juniperus virginica</td>
<td>Red cedar</td>
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<td>Oenothera biennis</td>
<td>Evening primrose</td>
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<td>Oxalis stricta</td>
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<td>Parthenorissus quinquefolia</td>
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<td>Rudbeckia hirta</td>
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<td>Setaria spp.</td>
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<td>Spartina pectinata</td>
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<td>Tilia americana</td>
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<td>Tradescantia ohiensis</td>
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<td>Trifolium pratense</td>
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<td>Vitis spp.</td>
<td>Grape species</td>
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<tr>
<td>Xanthium strumarium</td>
<td>Cocklebur</td>
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</table>

This document is intended solely as guidance and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. This guidance does not establish or affect legal rights or obligations and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.
February 1, 2002
DATE:    July 26, 1993                                          FILE REF: 3500

TO:    All WR&Z Guidebook Holders

FROM: Dale Simon WZ/6

SUBJECT: OHWM Description Checklist - Form 3500-46.

Some time ago, when I was reviewing program forms, Form 3500-46 was DELETED. Unfortunately, I
must not have told anyone else.

Please remove this form from your guidebook, if you still have it in there. It is no longer an official form.
The implication is that if it is in your guidebook (even though only a guide) then you should use it for all
OHWM determinations.

Also, in Chapter 40, page 40-6, V. 2. cross off the sentence: (This is a good reason to use the Ordinary
High-Water Mark Descripton check list, form 350046.) and also cross off paragraph V. 3.: Document
every OHWM determination on the Ordinary High-Water Mark Description Checklist, form 3500-46. A
copy of the OHWM checklist should be filed with both the district and Madison office.

Sorry I didn't get this to you earlier.
GUIDANCE PURPOSE AND DISCLAIMER

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This file is an electronic version of a chapter of the Waterway and Wetland Handbook. This document was scanned from the master handbook chapter kept at the Bureau of Fisheries and Habitat Protection central office in Madison. All effort was made to ensure this scanned electronic copy is an actual copy of the hardcopy document. Due to the electronic scanning process, there may be rare instances of typographical errors, omissions or improperly formatted pages. Please refer to the master handbook if accurate transcription is required.

Authorizing the adoption of bulkhead lines and bulkhead line/lease combinations.

PURPOSE

A bulkhead line is a legally established shoreline, adopted by a municipal ordinance and approved by the Department. The main purpose of a bulkhead line should be to regularize the shoreline. A secondary purpose of a bulkhead line is to establish a recoverable shoreline, which can be resurveyed at a later date.

Section 24.39(4), Wis. Stats., in conjunction with s. 30.11, Wis. Stats., grants authority to the board of commissioners of public lands to lease "rights to the beds of lakes and rights to fill in beds of lakes or navigable streams" to individual riparians and municipalities. These leases may be granted to riparians for the purpose of improving navigation and for the improvement or construction of harbor facilities. A lease may also be granted to municipalities, where the municipality is the riparian owner, for the purpose of improving or providing recreational facilities related to navigation for public use.

Since bulkhead line/lease combinations need not conform closely to the existing shoreline, large tracts of lakebed or state controlled streambeds may be leased to riparians for navigation or harbor related improvements, where a bulkhead line alone would not be acceptable.

MECHANISM

A bulkhead line is issued under s. 30.11, Wis. Stats. Only a municipality may apply for a bulkhead line. The municipality submits six copies of a proposed ordinance with a surveyed description of the proposed bulkhead line and six copies of the accompanying map. If the ordinance and map meet statutory standards, the Department approves the map and ordinance. Once the approved ordinance and maps are filed in accordance with the statute, the bulkhead line becomes legally established.
A bulkhead line/lease is approved under ss. 24.39 and 30.11, Wis. Stats. The bulkhead line/lease procedure is the same as for an ordinary bulkhead line, except that 1) shoreline conformance standards are eliminated; 2) once the bulkhead line is approved, the submerged lands lease is voted upon by the board of commissioners of public land; and 3) the commissioners will only act after the Department has found that the bulkhead line/lease is consistent with the public interest in the affected waters, as outlined under s. 30.11(5), Wis. Stats.

HISTORY

The historical roots of bulkhead lines may be traced back as far as the Northwest Ordinance of 1787. This document provided that the territory including Wisconsin would be ceded to the United States, but that the navigable waters within the territory must remain forever free for navigation. This and related provisions have come to be known as the Trust Doctrine, whereby the state merely holds the navigable water in trust for all the people of Wisconsin, and may not relinquish these waters to private interests (see Handbook Chapter 30 for further history of this concept).

Wisconsin owns the bed of all natural navigable lakes as a direct result of admission to the union in 1848. The beds of natural lakes are held in trust for the people, and this land cannot be sold or given away to private interests except under special conditions. The history of bulkhead lines and leases is mainly a recounting of the changing standards which have been applied to determine under what conditions the sale or lease of state owned submerged land would be allowed.

One of the earliest examples of a state effort to grant lakebed occurred in 1854. Chapter 276 of the private and local laws of 1854 authorized L. M. Parsons and others to drain Rush Lake in Winnebago County. The act granted this group title to the bed of Rusk Lake, provided they drained the lake within three years. No compensation was received by the state in exchange for the grant of the bed. Apparently the legislature felt that the public would be benefited by the draining of the lake and surrounding marshland. The project was never completed, and the act was repealed in 1856.

In the early 1890's, the Wisconsin Land and Improvement Company conceived a plan to drain Big Muskego Lake in Waukesha County by digging an artificial ditch from the lake to the Fox River. Once the lake was drained, the exposed bed would be sold to farmers for agricultural use by the company.

The Wisconsin Legislature had approved this plan by passing legislation granting the bed of this lake to the company. Priewe, a local citizen, filed suit in an effort to prevent the destruction of the lake. The Wisconsin Supreme Court in Priewe vs. Wisconsin State Land and Improvement Company, 103 Wis. 537 (1899), stated:

The Legislature has no more authority to emancipate itself from the obligation resting upon it which was assumed at the commencement of its statehood, to preserve for the benefit of all the people forever the enjoyment of the navigable waters within its boundaries, than it has to donate the school fund or the state capitol to a private purpose.

In 1902, the Supreme Court decided Rossmiller v. State, (114 Wis. 169). This case involved the right of the state to regulate ice cutting. The Court declared, in dicta, that the state could not sell lakebed for revenue purposes under any circumstances. Taken literally, this interpretation prohibited dredging or mining of state-owned lakebeds. Although the state was prohibited from selling lakebed at this time, filling of waterways was common, and was regulated by local authority.

The right of local government to regulate and control structures and establish "docklines" was established long before the state adopted regulatory controls. One example is Chapter 134, private and local laws of 1856, which granted the City of La Crosse, in its incorporation charter, the power "to regulate the construction of piers, docks, wharves and levees extending into the Mississippi River." These "docklines" were sometimes used to authorize
filling of lakes and streams. For example, the case Walker vs. Shepardson, 4 Wis. 486 (1855), upheld the right of a riparian to fill in a significant amount of the Milwaukee River in front of his lots but behind an established dockline in order to create a suitable wharf facility for his business.

The early regulation of piers, wharves and docks by local ordinance is discussed at length in Handbook chapters 70 and 75 covering structures and piers respectively. It is clear that filling of waterways was fairly common before the legislature and the courts began to restrict the practice of strengthening regulations covering bulkhead line approval.

In Chapter 335, Laws of 1917, the Legislature passed s. 30.02, Wis. Stats., which said that municipalities (excluding certain counties) may "by ordinance, resolution or bylaw establish, and from time to time may change and reestablish, dock or wharf lines upon existing navigable waters, or upon such waters thereafter to be created, within their respective boundaries." In 1919 Chapter 247 added the language: "All such lines shall conform as nearly as practicable to the original meander lines and surveys of such waters." These wharf or dock lines later came to be known as bulkhead lines and were effectively an artificial shoreline.

The Legislature also passed Chapter 454, Section 45, Laws of 1917, a statute covering leasing of state-owned property. This statute permitted the commissioners of public lands to lease portions of state owned lands other than parks and forest land to private individuals, mainly for the sale of damaged timber. Additionally, the commissioners could grant licenses for mineral prospecting on state-owned lands. State parks and forests were leased by the conservation commission. It was not until 1961 that the commissioners of public lands were given the right to lease state-owned lakebed.

Interestingly enough, the Legislature granted a portion of the bed of Lake Michigan to the Simmons Company in Chapter 230, Laws of 1919, for $500. No specific purpose was listed in this grant, which was completely illegal according to the Supreme Court interpretation of the legality of lakebed grants then in effect. Apparently, the Legislature was either unaware of the law, or chose to ignore it.

In 1927, the Wisconsin Supreme Court was again called upon to decide the validity of a legislative lakebed grant. The proposal involved transferring part of the bed of Lake Michigan to the City of Milwaukee, which would then fill in the area and transfer the land to a private industrial corporation. In exchange, the corporation would transfer valuable harbor property it owned to the City of Milwaukee for port development.

The Supreme Court sustained the grant in City of Milwaukee v. State, 193 Wis. 423 (1927), on the grounds that there would be little impact on navigation, the size of the area granted was relatively small in relationship to Lake Michigan, and the project was in the public interest. The transfer of land to the private corporation was held to be merely incidental to the overall public purpose of the project, hence legal. The court further found that the land granted to the corporation would protect the harbor and "will therefore be an aid to public navigation."

In 1928, the Wisconsin Supreme Court decided Angelo v. Railroad Commission, 194 Wis. 543, a case involving the right of the Wisconsin Railroad Commission to allow the removal of marl from the bed of a lake. The Court determined that the state had the right to enter into contracts for the sale of lakebed material, provided adequate compensation was received. Apparently, the Court felt that the state had many of the property rights normally associated with ownership of land, including the right to sell lakebed. According to this case, the Trust Doctrine mainly applied to the navigable water, not the bed itself. This case provided the framework allowing the leasing of lakebed which later became common.

The Legislature rewrote s. 30.02, Wis. Stats., by Chapter 455 of the Laws of 1933, to allow municipalities (except counties and cities larger than 300,000 persons) to establish both shore and pier lines (later known as bulkhead and pierhead lines), provided the lines were established in the public interest. In addition, "shore lines shall conform as nearly as practicable to existing shores." (changed from meander lines.) These lines were
subject to the approval and filing requirements of the Public Service Commission. This provision allowed the regularization of existing shorelines, and survives essentially unchanged today in s. 30.11, Wis. Stats. This chapter also prohibited placing any structure beyond an established shoreline other than a pier allowing the free movement of water underneath.

While the Legislature was allowing most municipalities the right to allow filling behind shorelines, the Wisconsin Supreme Court was clarifying the legislative right to make grants of lakebed. In 1957, the Court decided State v. Public Service Commission, 275 Wis. 112. In this case, the Court allowed the City of Madison to fill in 1-1/4% of Lake Wingra, a 320 acre navigable lake located within city boundaries, for park purposes not related to navigation improvement. The Supreme Court upheld the grant on the grounds that:

1. The land would be publicly controlled
2. The area would be used for public purposes and open to the public
3. The fill was small compared to the total lake area
4. No public lake uses would be destroyed
5. The project would afford the public more benefits than it would destroy.

Chapter 441, Laws of 1959, further clarified the treatment of bulkhead lines, and placed all bulkhead line laws in Chapter 30. The laws changed the name of “shoreline” to bulkhead line, and acknowledged previously existing shorelines as valid bulkhead lines (s. 30.04, Wis. Stats.) Section 30.05 declared that submerged lands of Lake Michigan previously granted to municipalities by the Legislature were exempt from bulkhead line or permit requirements. Section 30.06, Wis. Stats., allowed the Public Service Commission to waive state jurisdiction on federally navigable waters to the federal government, upon assurance that comparable federal water laws would be enforced so as to avoid state duplication of effort. Such a waiver, however, has not occurred.

Section 30.11, Chapter 441, Laws of 1959, is similar to the current version of Section 30.11, Wis. Stats., except that no provision was made in 1959 for bulkhead line/lease combinations. In theory, it appeared that all bulkhead lines would have to conform as nearly as practicable to the existing shore, or they could not be approved.

In 1961, ss. 30.11 and 24.39, Wis. Stats., were modified by Chapter 535. Section 24.39(4) was created, which established the rules under which lakebed or streambed controlled by the state could be leased. Leases could only be for navigation improvement or harbor construction, or if the riparian owner was a municipality, the leased land could be used for recreational activities related to navigation.

The scope of s. 24.39, Wis. Stats., was restricted to Lake Michigan, Lake Superior, the Mississippi and St. Croix rivers, the Fox River from Green Bay to the Wolf River, and to those portions of other waterways where there are Army Corps of Engineers maintained navigation channels. Section 30.11(2) was modified to allow for bulkhead line/lease combinations which deviated substantially from the existing shoreline. This provision was designed to allow leasing of lake and streambeds for harbor and navigation improvement. Additionally, prior to the execution of any lease, the Public Service Commission was required to make a finding that the project was "consistent with the public interest."

In 1963, the requirement of geographical conformity of a proposed bulkhead line with the existing shore was examined by the Wisconsin Supreme Court. The Town of Ashwaubenon proposed to fill 137 acres of the Fox River near Green Bay behind a 12,700-foot long bulkhead line. The line extended as much as 1,000 feet into the Fox River, which was less than 2,600 feet wide at the point. The filled land was primarily intended for private use by a paper company, including the docking and unloading of ships.
The Public Service Commission rejected the bulkhead line on the grounds that the line failed to conform as nearly as practicable to the existing shore. The Wisconsin Supreme Court decided, in a 4 to 3 decision, that factors other than simple geographical conformance could be weighed in the determination (Town of Ashwaubenon vs. PSC, 22 Wis. 2nd 38, 1963). The other elements the PSC could have considered were, according to the Court:

1. Existing and potential uses of the immediate area
2. Engineering complications
3. The cost of dredging and filling
4. The prospect of damage to scenic or recreational use of the river
5. The presence of pollution
6. The potential influence of the project on navigation

The Court went on to say:

Previous decisions of this court have authorized limited alterations of the shoreline ....

Recognizing that the proposed Ashwaubenon bulkhead line constitutes a greater intervention than has previously been approved by earlier decisions of this court in its evaluation of the trust doctrine, we must determine whether the legislature contemplated a trust to the extent here proposed ....

In our opinion, the fair interpretation of sec. 30.11, Stats. 1959, requires the conclusion that the legislature did in fact authorize the type of invasion of navigable waters which is proposed in this case, subject to the safeguards previously referred to. We do not find that the trust doctrine forecloses the legislature from this course. The standards prescribed by the legislature constitute adequate protection to the public and, thus, there is no neglect by the trustee of its responsibilities.

Curiously enough, the decision reached in this case was based upon the standards set forth in s. 30.11, Wis. Stats., in 1959, since that was the year the bulkhead line application was filed. In 1961, the laws and standards were changed (as previously described) to allow bulkhead line/lease combinations in this portion of the Fox River, but the Court applied the standards in effect at the time of application. The real significance of this case is the indication of the feelings of the Court with respect to bulkhead lines and the Trust Doctrine.

In 1969, s. 30.11(5), Wis. Stats., was modified to provide for department authority to reject proposed leases if they appeared to threaten excessive wildlife destruction. In addition, the Department was empowered to add a restriction on to the lease to protect public rights. This statute remains today as it was written in 1969.

**STANDARDS**

*Statutory*

*Section 30.11, Wis. Stats.*
1. Bulkhead lines may only be established by municipalities.

2. Bulkhead lines must be established in the public interest.

3. Bulkhead lines must conform as nearly as practicable to the existing shores.

4. Bulkhead lines may be approved farther from the existing shore if they are consistent with and part of a lease executed by the board of commissioners of public lands.

5. Bulkhead lines must not abridge the riparian rights of riparian proprietors.

6. A bulkhead line does not become final until it is filed according to the procedure in s. 30.11(3), Wis. Stats.

Section 24.39, Wis. Stats.

1. Prior to the execution of any lease by the board of commissioners of public lands, the Department must make a finding whether the proposed physical changes resulting from the lease are consistent with the public interest.

2. The Department shall not approve the lease if it appears to threaten excessive destruction of wildlife habitat.

3. The board of commissioners of public lands must include in the lease such limitations on final use as are determined by the Department.

4. A bulkhead line/lease may be rescinded in accordance with the procedures in s. 30.11(5)(c) upon complaint by any citizen that the use made of the leased rights is inconsistent with the purpose of the lease.

5. Leases of public land shall be made only for a full and fair consideration paid to the state. The amount and terms of payment is set by the commissioners of public lands.

6. All leases shall be consistent with the requirements of Chapter 26, Wis. Stats., relating to Department authority affecting the lease and sale of state park land and forest land.

7. The board of commissioners of public lands shall, so far as it finds desirable and practicable, utilize information and services of the Department in negotiating leases.

8. Leases must be to riparian owners for the improvement of navigation or for the improvement or construction of harbor facilities. If the riparian proprietor is a municipality, the lease may be for the improvement or provision of recreational facilities related to navigation for public use.

9. All revenues from leases shall be paid into the general fund.

10. Leases may only be executed in waters defined in s. 24.39(4)(d), Wis. Stats., including Lakes Michigan and Superior, the Mississippi and St. Croix Rivers, the Fox River from Green Bay to the Wolf River, and to those portions of other bodies of water where there is a Corps of Engineers maintained commercial navigation channel.

11. Lease terms must not exceed 50 years. Lessees have the first priority to obtain a new lease upon expiration of the old lease.
12. Any sublease of rights gained under a lease must be consistent with any restrictions imposed on the original lease.

13. Leases may be terminated in accordance with s. 24.39(5)(g) for non-use or improper use after five years.

14. All rights or leases entered into prior to 1961 remain in force.

**Administrative**

1. NR 1.95, Wis. Adm. Code, establishes general standards to be applied by the department in decisions affecting wetlands. The department shall consider proposals which require its approval with the presumption that wetlands are not to be adversely impacted or destroyed and that the least overall environmental impact shall result.

2. NR 115, Wis. Adm. Code, establishes administrative standards which must be followed by counties in their administration of shoreland zoning ordinances. The Department must reflect these standards in approvals issued pursuant to s. 30.11, Wis. Stats.

3. NR 116, Wis. Adm. Code, establishes administrative standards for floodplain management which must be followed by local units of government. These standards shall be reflected in state approvals granted pursuant to s. 30.11, Wis. Stats.

4. NR 117, Wis. Adm. Code, establishes standards which cities and villages must follow in zoning wetlands within the shoreland area.

5. NR 118, Wis. Adm. Code, establishes standards for county, city and village zoning along the Lower St. Croix River.

6. NR 150, Wis. Adm. Code, establishes procedures for Department compliance with s. 1.11, Wis. Stats. Bulkhead lines are type III actions requiring issuance of a news release and leases are Type II actions, hence require the preparation of an Environmental Assessment.

7. NR 302, Wis. Adm. Code, provides guidelines for allowable development along designated wild and scenic rivers.

**Administrative Interpretations**

1. Establishment of a federal "harbor line" does not eliminate the need for a state bulkhead line or lease. A bulkhead line means "shoreline or property line in the sense of high-water mark". Bulkhead lines should not be used to create substantial parcels of usable land, since the lands created "become the property of the riparian owners" (49 OAG 126, 1960). **Note that this portion of this opinion was overruled by 63 OAG 446 (1974).**

2. A bulkhead line ordinance does not become effective until it is correctly filed according to s. 30.11, Wis. Stats. The approved bulkhead line ordinance and map may be filed by the recipient at any time after receiving state approval. When territory is annexed by a municipality, any approved bulkhead lines automatically transfer to the newly governing municipality (64 OAG 112, 1975).

3. Where title to submerged lands in Lake Michigan has been granted to a municipality by the Legislature, the Department has no authority to issue bulkhead lines (BLS opinion 4-20-73).
4. Upon revocation of a bulkhead line, any filled lands become illegal deposits and are subject to enforcement action by the Department. Bulkhead lines may be revoked pursuant to departmental proceedings (the exact proceedings are not specified in this opinion), or the municipality may apply to modify (or remove) the existing bulkhead line.

The Department may include conditions on any bulkhead line approval to guarantee placement of fill within a specified time period. The bulkhead line may not require the giving up of uplands by a riparian owner as compensation for "giving" the riparian owner lakebed behind the line (BLS opinion 10-31-74).

5. The establishment of a bulkhead line does not grant full title to the bed landward of the line (note that this opinion overrules part of 49 OAG 126). A riparian owner must obtain a permit or contract under s. 30.20, Wis. Stats., prior to dredging the bed landward of a bulkhead line.

The bulkhead line may serve to replace the OHWM for purposes of applying s. 30.19, Wis. Stats., but this must be determined on a case by case basis. Under most circumstances, the original OHWM should be used for this purpose (63 OAG 109-74).

6. A lease under s. 24.39, Wis. Stats., must be accompanied by an approved bulkhead line under s. 30.11, Wis. Stats., since the lease does not authorize any work at the project site (BLS opinion 4-1-75).

PROCESS

Application

The application for a bulkhead line follows the procedure set forth in Manual Code 3506.1. Manual Code 3500.6 assigns the authority to approve the map and legal description to the Director of the Bureau of Water Regulation and Zoning, while the accompanying ordinance is approved by the District Director.

Specific guidance on the application requirements is found in "BULKHEAD LINE INFORMATION REQUIREMENTS" (copy enclosed). The application consists of six copies of the proposed map and ordinance submitted to the appropriate District or Area office.

If the project consists of a bulkhead line/lease combination, the application should also indicate the exact area proposed for lease, and the intended use of the leased area.

Field Investigation

The purpose of the field investigation is to determine whether the proposed bulkhead line or lease meets the required statutory standards. Department personnel should consult early with concerned parties before any expensive surveys are undertaken. If it appears that the proposed bulkhead line cannot be approved because it fails to meet statutory standards, the parties should be explicitly informed of the problem. There is no point wasting time and money on a project which will ultimately be denied.

On an initial reconnaissance survey, the investigator should check to see how closely the proposed bulkhead line conforms to the existing shoreline. Bulkhead lines may deviate from the shoreline to allow for minor regularization of the shoreline, but only if the regularization is in the public interest. Substantial creation of land is not acceptable unless a lease is secured pursuant to section 24.39, Wis. Stats.

The investigation of bulkhead lines should examine the following factors:

1. The effect of bulkhead line approval on water quality.
2. Potential impacts on fish and game habitat.

3. The ability of the municipality to insure timely placement of fill behind the bulkhead line. If it appears that filling will be done piecemeal by the affected riparians, thus creating stagnant finger channels, the bulkhead line may be denied.

4. The potential impacts of bulkhead line approval on the riparian rights of others, including their rights to access and navigation.

5. The effect on flood flow capacity of a stream.

6. Any potential conflict between the bulkhead line and local shoreline zoning and floodplain zoning. Bulkhead lines which may not comply with local zoning should be conditioned upon local zoning approval.

7. For a bulkhead line/lease combination, the bulkhead line need not conform closely to the existing shoreline. The investigator should determine exactly what use is intended for the leased land, and specifically what wildlife habitat will be affected and how severely. If the intended use of the leased land does not conform to statutory requirements, the proposal must be rejected. Obviously, if the lease is proposed on lands not subject to leasing arrangements (s. 24.39(4)(d), Wis. Stats.), the proposal cannot be considered.

NOTICE AND HEARING REQUIREMENTS

There is no statutory requirement to provide public notice of any bulkhead line proposal. For a proposed lease under s. 24.39, Wis. Stats., the Department must notify the clerk of the county and the clerk of the city, village or town where the bulkhead line is located, the Department of Health and Social Services, and the U.S. Army Corps of Engineers at least 30 days prior to determining whether or not the proposed lease is in the public interest. A hearing is not required for bulkhead line approval, and is discretionary for lease approvals (s. 30.11(5)). Any decision by the Department may be subject to appeal under sections 227.42, 227.52, and 227.53, Wis. Stats.

Upon receipt of a complaint by any member of the public that the current use made of rights leased under s. 24.39, Wis. Stats., is inconsistent with the original grant or the public interest, the Department must publish a class 2 notice of hearing under Chapter 985, Wis. Stats. After publishing the notice, the Department must hold a hearing to determine the facts. Section 30.11(5)(c), Wis. Stats., specifies procedures to be followed in the event the Department finds that the lease is no longer in the public interest.

FINAL DISPOSITION

The bulkhead line ordinance is approved by letter from the District. The map and legal description are approved by the Bureau. The final approval should contain two copies of the approved ordinance and map. All conditions which are to be imposed must be specified in the approval letter. Conditions which may be imposed include time limits on filling, height of fill behind the line, type of fill which is allowable, and erosion control measures which are required during the filling. The conditions of approval are subject to appeal under sections 227.15 and 227.16, Wis. Stats., and this fact must be noted in the approval letter. Note that the bulkhead line is not approved until the map and ordinance are properly filed. If the final disposition is denial, a denial letter should be sent to all affected parties, advising them of appeal rights under sections 227.42, 227.52, and 227.53, Wis. Stats., and specifying the reasons for denial.
MONITORING

Bulkhead line or lease approvals should require the applicant to notify the Department five days before commencing the filling operation and five days after completion of the work. There should be a follow-up inspection to determine if the final project description meets the approved description. If violations are noted, enforcement action should be considered to resolve the violations.

ENFORCEMENT

Several routes appear to be open to the Department by which a bulkhead line approval may either be rescinded or modified. One route would be for the Department to initiate a s. 30.03, Wis. Stats. proceeding to rescind or modify the previously approved bulkhead line. The Department's authority to initiate such a proceeding is set forth in Town of Ashwaubenon v. PSC, supra, which holds that a bulkhead line approval is "subject to revocation at the pleasure of the Legislature." Since the Department serves as the Legislature's delegate regarding the granting of bulkhead approvals, the Department can similarly act to revoke approvals either in whole or in part. The basis for revocation must be the failure of the approved bulkhead line to meet the public interest or that, as implemented, the bulkhead line is not a regularization of the shoreline.

Another route is for the municipality to take the initiative. Subsection 30.11(1), Wis. Stats., allows a municipality to reestablish an already approved bulkhead line; reestablishment is again subject to Department approval. Such approval is based upon the standards set forth in subsection 30.11(2), Wis. Stats. A new ordinance to reestablish the bulkhead line could establish the original ordinary high water mark as the boundary for properties where no bulkhead line improvements have been made. All other properties would be allowed to remain essentially unaffected.

Any unauthorized structure beyond a bulkhead line constitutes an obstruction to navigation, and either the Department, the municipality or any citizen may initiate a s. 30.15, Wis. Stats., procedure against the owner of such a structure. The Department may also initiate a s. 30.03/30.12, Wis. Stats., action against any structure or pier extending beyond an authorized bulkhead line.

Upon revocation of a bulkhead line, any fill or structures between the original ordinary high water mark and the bulkhead line become illegal, unless a permit under s. 30.12, Wis. Stats., is obtained for the structures. Action may be taken against unauthorized structures under ss. 30.03, 30.12 and 30.15, Wis. Stats., and of course the same applies to any fills.

PUBLIC INFORMATION

The Department publication "BULKHEAD LINE INFORMATION REQUIREMENTS" is available to explain procedures for obtaining bulkhead line approvals. Additional useful publications include "PUBLIC OR PRIVATE? I: Navigability," "PUBLIC OR PRIVATE? II: The Ordinary High Water Mark," and "Saving Your Shoreline."

v:\perm\wz92572k.djd
This memo is in response to questions raised by Ron Fassbender concerning the relationship between county shoreland zoning and approved bulkhead lines.

The questions posed by Ron and the responses are as follows:

1. **For purposes of county shoreland zoning, is the 75 foot building setback measured from a bulkhead line (once filled) or from the ordinary high-water mark?**

   The 75 foot setback should be measured from the waterward edge of any legal fill placed behind an approved bulkhead line. For the purpose of administering local shoreland zoning ordinances and ch. NR 115, the waterward edge of such fill should be treated administratively as a new ordinary high-water mark. This "new ordinary high-water mark" must be considered revocable since the Wisconsin Supreme Court has clearly stated in *Ashwaubenon v. Public Service Commission*, 22 Wis. 2d 38 (1963), that the state has the right to revoke any previously approved bulkhead line and the right to have fill which was placed on lakebed or streambed removed.

2. **Assuming the answer in question no. 1 is the OHWM, does anyone control development on the filled lakebed? (In this case the county assumes they have no jurisdiction below the OHWM and that structures can be placed up to the bulkhead line)?**

   Treating the waterward edge of fill placed behind an approved bulkhead line as a "new ordinary high-water mark" may simplify the situation from the county's point of view, but technically, the county's shoreland zoning jurisdiction is not limited to areas above the ordinary high-water mark. Section 144.26, Wisconsin Statutes, authorizes municipal shoreland zoning regulations for "lands under, abutting or lying close to navigable waters." Section 59.971 requires each county to zone "all shorelands in its unincorporated area" and defines shoreland to mean the area "within" 1000 feet of the ordinary high-water mark of a lake, pond or flowage and 300 feet of the ordinary high-water mark of a river or stream, or to the landward side of the floodplain, whichever distance is greater. If one were to draw shoreland boundaries on a map, lakebeds and streambeds would clearly be within the shoreland boundaries. This does not mean that a county must regulate all activities which are conducted below the ordinary high-water mark of all the navigable bodies of water within the county. It only means that the minimum standards for shoreland zoning ordinances found in ch. NR 115 must be applied to the beds of navigable waters, where pertinent. Where any structure other than a pier, boat hoist or boathouse is proposed to be placed on fill placed between an approved bulkhead line and the original ordinary high-water mark, ch. NR 115 requires that the county enforce a 75-foot setback from the
ordinary high-water mark (in this case, the "new ordinary high-water mark") unless existing nearby structures are located closer to the "new ordinary high-water mark" (which would automatically allow a reduced setback) or unless the County Board of Adjustment has granted a variance after finding that the imposition of the 75 foot setback would constitute "an unnecessary hardship" for the landowner in question.

The county government and the Department have concurrent jurisdiction over development on fill that is placed between an approved bulkhead line and the original ordinary high-water mark, because section 30.11(4), Wis. Stats., provides that: "Riparian proprietors may place solid structures or fill up to such line." Clearly, section 30.11(4) would allow the placement of the same structures that would be allowed under section 30.12. Other types of structures should not be a problem in the future because of the fact that a bulkhead line 75 feet or more from the ordinary high-water mark is not likely to be approved by the Department under current bulkhead line standards. There should be no need for the Department to exert control (beyond that specified in the bulkhead line approval) over development on filled lakebed or streambed in the future, because that application of the 75 foot setback required by the local shoreland zoning ordinance will severely restrict the placement of all structures except piers, boat hoists and boathouses on the filled area between the approved bulkhead line and the ordinary high-water mark.

It should be noted that the specific mention of "solid structures" in section 30.11(4), Wis. Stats., does not, by implication, prohibit the placement of nonsolid piers by riparian landowners. Section 30.13, Wis. Stats., would still be applicable regardless of whether a bulkhead line has been established. If the requirements of section 30.13 are met, a riparian would be able to put a nonsolid pier between an established bulkhead line and the ordinary high-water mark if the area has not been filled, or waterward of an established bulkhead line if fill has been placed out to the bulkhead line.

3. Can a boathouse be built below the OHWM but behind the bulkhead line (refer to s.30.12)?

For bulkhead lines approved after December 16, 1979 (the effective date of section 30.121, Wis. Stats.), boathouses are not allowed on filled lakebed or streambed which has been placed pursuant to section 30.11(4), Wis. Stats. Section 30.121 prohibits the placement or construction of boathouses and fixed houseboats beyond the ordinary high-water mark of any navigable waterway. Since this is a statutory prohibition with no exceptions provided for, the Department cannot create an administrative exception (in other words, inspite of the fact that we may treat an approved bulkhead line as a "new ordinary high-water mark" for the purpose of administering ch. NR 115, for the purpose of applying section 30-121, Wis. Stats., "original" ordinary high-water mark must be used).

For bulkhead lines approved on or before December 16, 1979, we will abide by the conditions specified in the approval (and allow boathouses unless they were specifically prohibited), unless we are willing to seek amendment or revocation of the bulkhead line approval.

Reviewed By: Ed Brick
Linda Wymore
Joe King
Dan Holzman
Bob Sonntag

RWR:LW:jkb

Attach.

3568H
This memo is in response to questions Ed Bourget has asked about a condition included in past bulkhead line approvals that states... "Filling authorized by establishment of this bulkhead line shall be completed within five years of the date of this approval, or action may be initiated to rescind this approval."

The questions asked by Ed and the responses are as follows:

1) Does this mean that the bulkhead line is rescinded after five years or can they continue to fill in the area behind the bulkhead line?

The phrase "Action may be initiated" in the above condition indicates that additional filling behind the bulkhead line may continue after expiration of the five year period unless action is taken by the Department to rescind or modify the approval.

2) How can we rescind the bulkhead line? What formal steps should we follow?

Several routes appear to be open to the department by which a bulkhead line approval may either be rescinded or modified. One route would be for the department to initiate a s. 30.03(4), Wis. Stats. proceeding to rescind or modify the previously approved bulkhead line. The department's authority to initiate such a proceeding is set forth in Town of Ashwaubenon v. PSC, 22 Wis. 2d 38 (1963) supra, which holds that a bulkhead line approval is "subject to revocation at the pleasure of the Legislature." Since the Department serves as the Legislature's delegate regarding the granting of bulkhead approvals, the Department can similarly act, after hearing, to revoke approvals either in whole or in part. The basis for revocation must be the failure of the approved bulkhead line to meet the public interest or that, as implemented, the bulkhead line is not a regulatorization of the shoreline.

Another route is for the municipality to take the initiative. Subsection 30.11(l), Wis. Stats., allows a municipality to reestablish an already approved bulkhead line; reestablishment is again subject to department approval. Such approval is based upon the standards set forth in Subsection 30.11(2), Wis. Stats. A new ordinance to reestablish the bulkhead line could establish the original ordinary high water mark as the boundary for properties where no bulkhead line improvements have been made. All other properties would be allowed to remain essentially unaffected.

3) Can you interpret the above condition?
Unless an action is initiated, as identified under 2) above, to rescind or modify the original bulkhead line approval, filling behind the bulkhead may continue past the five year period stated in the above condition.

Reviewed By:  
John Coke  
Mike Cain  
Scott Hausmann

RWR:JC:sm  
6937K
Date: February 3, 1987    File Ref: 3500

Put In: Chapter 60, Water Regulation Handbook

To: District Directors

Distribution: All Program Staff

From: Scott Hausmann - WZ

Subject: Interpretation of ss. 30.05, 30.772 and 30.773

Attached is a response from Mike Lutz to Greg Pilarksi's questions regarding the State's authority or lack thereof to regulate mooring buoys in areas where lakebed grants have approved.

Please place in Chapter 60 of your Water Regulation Handbook.

SH:DS:el
You have inquired as to whether s. 30.05, Stats., has any effect on the state's application of ss. 30.772 and 30.773, Stats., to areas of Lake Michigan which have been the subject of a lakebed grant. In this instance, the area involved is Milwaukee harbor area which was the subject of a lakebed grant to Milwaukee County.

Section 30.05, Stats., states as follows:

"Nothing in this chapter relative to the establishment of bulkhead or pierhead lines or the placing of structures or deposits in navigable waters or the removal of materials from the beds of navigable waters is applicable to submerged shorelands in Lake Michigan, the title to which has been granted by the state to a municipality."

Sections 30.772 and 30.773, Stats., generally regulate the placement of moorings in navigable waters. The question to be answered is whether the regulation of moorings is the regulation of a structure which was intended to be exempt from ch. 30, Stats., by virtue of s. 30.05, Stats.

I have been involved in prior litigation in which the status of a mooring buoy as a structure was at issue. Attached is my brief in a case in which the Department asserted that a mooring buoy was, in fact, a structure. The position which I asserted was accepted by the hearing examiner and upheld by the circuit court and the court of appeals.

While ss. 30.772 and 30.773, Stats., do regulate obstructions to navigation, they do so by regulating structures, i.e., mooring buoys. In my view, the status of a mooring buoy as a structure is inescapable and the exemption of s. 30.05, Stats., is therefore applicable.

You have also inquired as to whether a non-riparian can place mooring buoys in a lakebed grant area. In my view they can, but with the permission of the county which is the owner of the lakebed.

Your question on permits and permitting authority are made moot by the applicability of s. 30.05, Stats. Sections 30.772 and 30.773, Stats., are simply not applicable. Permit requirements in the lakebed grant areas are entirely up to the county.

Your assumptions on anchoring are correct. Temporary anchoring is differentiated by both the Department and Federal government from the placement of a structure such as a mooring anchor on the bed with the accompanying attachment of a mooring buoy. Restrictions placed by the state or local unit of government on mooring buoys have nothing to do with the right of temporary anchoring. However federal restrictions or permit requirements dealing with the placement of mooring buoys in federal waters would still be applicable.

If I can be of further assistance in this matter, feel free to contact me.
BEFORE THE  
STATE OF WISCONSIN  
DIVISION OF HEARINGS AND APPEALS  

INVESTIGATION ON MOTION OF THE DEPARTMENT OF NATURAL RESOURCES OF AN  
ALLEGEDLY ILLEGAL PLACEMENT OF MOORING BUOYS ON THE BED OF LAKE GENEVA,  
WALWORTH COUNTY, BY AUDREY MILLIETTE, ET AL.  

CASE No. IH-81-51  

BRIEF OF THE DEPARTMENT OF NATURAL RESOURCES  

FACTS  

In an application dated April 21, 1980 (Exhibit 1), and in an application dated March 20, 1980 (Exhibit 2),  
Audrey Milliette and Duane Assmann respectively submitted a form entitled, "APPLICATION FOR  
PLACEMENT OF WATERWAY MARKER IN WATER WITHIN THE CITY OF LAKE GENEVA, COUNTY  
of WALWORTH, WISCONSIN." (Form 8700-58). In a letter dated June 6, 1980, addressed to Mayor Richard  
Folman of the City of Lake Geneva and signed by Dale Morey, the Department's Boating Law Coordinator,  
(Exhibit 3), the Department of Natural Resources indicated that mooring buoy permits would not be issued to Ms.  
Milliette and Mr. Assmann, among others. Copies of this letter were sent to Ms. Milliette and Mr. Assmann  
(Hereinafter referred to as the respondents). As a reason for denial, the Department indicated the following:  

"It is the Department's opinion that these property owners are not riparian owners. These property owners  
have covenants to their deeds which allow them access to the lake through a public park. The covenants  
also allow the above named property owners to construct a pier and a bath or boat house."

When the respondents continued to place mooring buoys subsequent to the denial of the mooring buoy permits,  
the Department initiated the present action. In a stipulation signed by the attorney for the respondents and dated  
November 17, 1981 (Exhibit 4), the respondents agreed that they did own property on Wrigley Drive in Lake  
Geneva and that such property was subject to the Baker Park dedication. They further acknowledged that they  
did place mooring buoys in the waters of Lake Geneva in the vicinity of their property. The respondents stated at  
the hearing on September 23, 1983, that they were still placing mooring buoys in the waters of Lake Geneva.  

I. THE RESPONDENTS ARE PLACING MOORING BUOYS IN THE WATERS OF LAKE GENEVA  
WITHOUT A PERMIT AS REQUIRED BY S. 30.12, STATS., S. 30.74, STATS., AND S. NR 5.09, WIS.  
ADM. CODE.  

Section 30.12(1), Stats., states:  

"(1) GENERAL PROHIBITION. Except as provided under Sub. (4), unless a permit has been granted by  
the department pursuant to statute or the legislature has otherwise authorized structures or deposits in  
navigable waters, it is unlawful:  
(a) to deposit any material or to place any structure upon the bed of any navigable water where no  
bulkhead line has been established; or  
(b) to deposit any material or to place any structure upon the bed of any navigable water beyond a  
lawfully established bulkhead line.  

Section 30-15(l)(d), Stats., provides for a forfeiture from any person who:
(d) Constructs or places any structure or deposits any material in navigable waters in violation of Section 30.12 or Section 30.13."

Taken together, the statutes are straightforward and unambiguous. Unless a permit has been granted no structure may be placed on the bed of navigable waters. Section 30.12(i), Stats., provides that only riparian owners may apply for and be granted a permit.

A mooring buoy consists of a float attached by chain to a weight, often made of concrete, resting on the floor of a body of water. The Wisconsin Attorney General has discussed whether such an object is a structure subject to s. 30.12, Stats., as follows:

"If an unattended boat is attached to the bed of a navigable waterway for a period of time, and in a manner which connotes permanency, e.g., spud poles, chain attached to cement, filled drum or an object driven into the riverbed, it would, in M opinion, be a prohibited 'structure' in violation of sec. 30.12, Stats., and may also constitute an unlawful obstruction to navigation in violation of sec. 30.15. If the unattended and anchored boat is left on navigable water for an unreasonable length of time, it constitutes a violation of sec. 30.15. Since sec. 30.15(3), Stats., provides that each day an obstruction to navigation exists constitutes a separate violation, it is likely that leaving such unattended and anchored boat for more than one day would prima facie be a violation." 630 AG 601, 603 (1971)

In its most recent decision involving s. 30.12, Stats., the Wisconsin Supreme Court stated as follows:

"Sec. 30.12, Stats., regulates the placement of structures on the beds of navigable waters. 'Structure' is not defined for purposes of sec. 30.12. Sec. 990.01(l), relating to general rules of statutory construction, indicates that all words and phrases must be construed according to their common and approved usage. The common and approved meaning of a word can be ascertained by reference to a recognized dictionary. Interest of B.M., 101 Wis. 2d 12, 18, 303 N.W. 2d 601, 605 (1981).

Webster's Third New International Dictionary 2267 (1961) defines 'structure' as 'something constructed or built ... something made up of more or less interdependent elements or parts..."' State v. Bleck 114 Wis. 2d 454, 463 (1983)

The Wisconsin Attorney General has clearly stated that a mooring buoy can be a structure subject to s. 30.12, Stats. Certainly, attaching a boat to a mooring buoy for the entire boating season as done by the respondents gives the "permanency" and "unreasonable length of time" as required by the Attorney General. The Supreme Court definition would also include a mooring buoy as the weight is most often "something constructed or built" (e.g. a concrete form) with "interdependent elements or parts". (e.g. the attachment for the chain, the chain and the float).

The respondents have placed structures in the waters of Lake Geneva. They do not have a permit issued under s. 30.12, Stats. Nor do they have any other type of permit or authorization for the mooring buoys which they placed. Section 30.12(l), Stats., does not require that a permit satisfying its requirements be issued only pursuant to s. 30.12(2), Stats. Structures may be authorized by a "permit granted by the department pursuant to statute". The Legislature has established a regulatory system for mooring buoys in s. 30.74(2), Stats., which states as follows:

"UNIFORM NAVIGATION AIDS. (a) By rule establish uniform marking of the water areas of this state through the placement of aids to navigation and regulatory markers. Such rules shall establish a marking system compatible with the system of aids to navigation prescribed by the United States Coast Guard and shall give due
regard to the system of uniform waterway markers approved by the advisory panel of state officials to the merchant marine council, U.S. coast guard. After January 1, 1968, no municipality or person shall mark the waters of this state in any manner in conflict with the marking system prescribed by the department. Any marker which does not comply with such marking system by January 1, 1968, is deemed an unlawful obstruction to navigable waters and may be removed in accordance with law.

(b) For purposes of this section 'aids to navigation' means buoys, beacons and other fixed objects in the water which are used to mark obstructions to navigation or to direct navigation through safe channels; 'regulatory markers' means any anchored or fixed marker in the water or anchored platform on the surface of the water, other than aids to navigation, and shall include but not be limited to bathing beach markers, speed zone markers, information markers, mooring buoys, fishing buoys and restricted activity area markers."

The Department is given specific authorization to establish by rule a system of uniform marking of water areas through the placement of aids to navigation and regulatory markers. Under s. 30.74(2)(b), Stats., the definition of regulatory markers specifically includes mooring buoys.

The Department has in fact enacted the rules required by s. 30.74(2), Stats. The Department's regulatory program for aids to navigation and regulatory markers is found in s. NR 5.09 Wis. Adm. Code (Appendix A). Specifically, s. NR 5.09(3) Wis. Adm. Code states as follows:

"AUTHORITY TO PLACE MARKERS. (a) No waterway marker shall be placed on, in, or near the waters of the state unless such placement is authorized by an agency or political subdivision of the state having power to give such authorization, except that the provisions of this section shall not apply to private aids to navigation under the jurisdiction of the U.S. coast guard.

(b) Such agency or political subdivision of the state will, prior to authorizing placement, obtain the necessary clearances of any federal and state agencies concerned.

(c) The agency or political subdivisions of the state authorizing the placement of waterway marker will inform the department of the following:

1. Exact location of the marker, expressed in latitude and longitude, or in distance and direction from one or more fixed objects whose precise location is known.

2. The description and purpose of the marker, including its identifying number, if any, as required by subsection (2) (a)5 above."

The "agency or political subdivision of the state having power to give such authorization" is in this instance the City of Lake Geneva. The "necessary clearances of any federal and state agencies concerned" refer here to the approval of the Wisconsin Department of Natural Resources.

In this instance, the respondents did apply for a mooring buoy permit on a form provided by the Department. (Exhibits I & 2) Where the Department refused to grant its approval, (Exhibit 3), the City of Lake Geneva was without jurisdiction to issue the respondents mooring buoy permits. The respondents were notified of the Department's disapproval of their application and acknowledged at the hearing that they had never received any type of permit for the placement of their mooring buoys. Such being the case, they were clearly in violation of the provision in s. NR 5.09(3)(a), Wis. Adm. Code which precludes the placement of a waterway marker without a permit, which is authorized by both the local unit of government and the Department of Natural Resources.
In summary, a permit is needed to place a mooring buoy. If for any reason the permit process of s. NR 5.09, Wis. Adm. Code is held to be inapplicable, then mooring buoys still remain a structure subject to an s. 30.12, Stats., permit.

II. THE RESPONDENTS LACK THE RIPARIAN STATUS NECESSARY TO PLACE MOORING BUOYS IN THE WATERS OF LAKE GENEVA.
A number of questions have arisen recently regarding the permissible uses of submerged lakebed granted by the Legislature to municipalities. While these questions pertain to legislative lakebed grants, the same principles generally apply to all waterways (not just the Great Lakes) since both the Legislature's and the Department's powers to authorize development on lake and river bed are limited by the "Public Trust Doctrine" (Article IX, Section 1, Wisconsin Constitution, as interpreted by the Wisconsin Supreme Court). Of course, the Department's powers to authorize lakebed development are more limited in scope than those of the Legislature due to the applicability of the statutes which we administer.

General information regarding permissible uses of submerged lakebed is attached for your information. The most quotable item is a letter from former Attorney General Bronson LaFollette to State Representative Neubauer. The following are responses to specific questions which have been raised by Southeast District:

1. **Is "para-sailing" an allowable use of lakebed which was granted to a municipality for "public park, parkway and highway purposes"?**

   Para-sailing is essentially a navigation-oriented recreational use of a waterway. While it is more demanding of surface water space than many other such uses, it still doesn't differ in principle from the status accorded to boating or water-skiing. Recreational uses are generally consistent with the concept of public parks and would be appropriate in this instance if they were clearly under the control of Milwaukee County (the grantee of the lakebed). Such control would have to be clearly stated in any concession agreement or other legal arrangement allowing this use to take place. Surface water use conflicts could arise and would have to be addressed at the time they occur, perhaps through local regulation.

2. **Would a "fast-food restaurant" be permissible on submerged or filled lakebed granted to a municipal park, parkway and highway purposes?"**

   Restaurants, unless an integral part and clearly intended to serve only the patrons of an allowable use of lakebed are not, in themselves, permissible. The reasoning for this is spelled out in the attached materials, in particular, the letter from Attorney General LaFollette to Representative Neubauer. We would not draw any distinction between a "first-class restaurant" and a "fast-food restaurant" for that purpose.

Incidentally, a number of other non-public uses of lakebed (e.g., condominiums) are also contrary to guidelines established by the Supreme Court. Because of a particular situation in Milwaukee where it appears that several legislative lakebed grants overlap, I also want to address the question of what uses of lakebed would be allowable in such a case (predicated on the assumption that all uses authorized in the grant are constitutionally permissible). Where two or more legislative lakebed grants apply to the same area, we should presume that all uses allowed by the grants are allowable.
the grants would be acceptable in that common area. If the Legislature had intended to limit uses to those spelled out in just one of the grants, it would presumably have provided for that in the more recent grant(s).

Reviewed by:

Scott Hausmann
Michael Cain

RWR:sm
Attach.
cc: George Meyer - AD/5
    Jim Kurtz - LC/5
9066K
TO: C. Topf Wells  
Senator Adelman's Office  
Room 8, South  
CAPITOL

FROM: Robert W. Roden - WZ/6  
Bureau of Water Regulation & Zoning  
Department of Natural Resources

SUBJECT: Legislative Lakebed Grant Concerns

You recently asked me to provide you with the Department's concerns regarding grants of submerged lands to municipalities by the Legislature. From our perspective, there have been two general problems:

1. The purpose of some legislative grants appears to us to be inconsistent with the "public trust doctrine" as enunciated in Wisconsin Supreme Court decisions, and;

2. Development may occur on granted lakebed areas which is inconsistent with the stated purpose for which the grant was made. This may be done by riparian (shoreline) property owners other than the grantee of the lakebed or may happen with the concurrence of the grantee.

As you know, section 30.05, Stats., removes much of the authority normally given by the Legislature to the Department of Natural Resources in those areas of Lake Michigan where a legislative lakebed grant has been made to a municipality. This means that if, for example, individual riparian owners place fills in these portions of the lake, there is no effective regulatory system to require corrective actions.

Before getting into specific examples which illustrate these problems, I want to provide our perception of what the Supreme Court has stated are acceptable types of development on publicly-owned lakebed. There have been a number of cases on this subject. Perhaps the most comprehensive statement by the Court appears in two cases from 1957, State v. Public Service Commission [275 Wis. 112] and City of Madison v. State [1 Wis. 2d (252)3. Since the Madison v. State decision incorporates the reasoning contained in State v. Public Service Commission, I will only go through the criteria established by the Madison case.

The standards articulated by the court are put in terms of acceptable types of buildings but these standards could also be applied to any type of development which converts lakebed to a dry land area. These standards are:

1. A public body must control the use of the building;

2. The building must be devoted to public purposes and must be open to the public;

3. The reduction in the area of the lake resulting from the construction of the building must be very small (a more recent case relating to accumulated "minor" encroachments onto lakebed is Hixon v. Public Service Commission, 32 Wis. 2d 608);

4. No public use of the lake can be either destroyed or greatly impaired by construction of the building;
5. The loss of the public's ability to use the area of the building for "traditional" public rights in navigable waters (the rights to navigate, fish, swim, etc.) must be substantially outweighed by the benefits that would accrue to the public using the building.

In terms of the Department's concerns with some grants and lakebed developments, the first two criteria are the most significant. For the public to retain control of the use of a building, it is not necessary that the building be managed directly by public employees but it is clear that decisions on the types of uses and activities within that building and on access to the building must be left to a governmental entity and not to private interests. The requirement for a building to be open to the public speaks for itself. This does not mean there can be no control over access but access must be granted to the general public on an equal basis.

Perhaps the key element in these criteria is what constitutes a valid public purpose for a building on lakebed. We believe it is clear that the Court intended to equate the acceptable public purposes of a building with the recognized public rights in navigable waters. The Court in Madison v. State said that a proposed civic center on Lake Monona would be acceptable since the use of the building was essentially recreational. The decision implied that other types of public buildings (e.g. municipal office building, fire or police station) might be viewed differently. Since a "first class restaurant" seems to be the type of development of current interest to several communities, we have focused our recent attention on whether this type of development meets the Court's standards. Our view is that while food service facilities related to recreational uses of the lake and lakebed area are consistent with the public trust, (e.g. concession stands in parks, food service for patrons of a marina), a restaurant that was not dedicated specifically to these uses would not be. I have attached correspondence regarding proposals in Racine which expand on this reasoning.

Examples where we feel there are significant questions requiring existing or proposed uses of submerged lands granted by the Legislature to municipalities include:

1. City of Milwaukee: The "Pieces of Eight" restaurant is located in an area granted by the Legislature to the City of Milwaukee (Chapters 151 and 516, Laws of 1929). This grant was made for the purpose of aiding navigation and fisheries and was primarily for the construction of various types of harbor facilities and other facilities "not inconsistent with the improvement of navigation and fisheries in Lake Michigan." We do not see where "first class restaurants" are consistent with improvement of navigation or fisheries and such development is clearly not a harbor facility as defined in state statutes.

2. City of Kenosha: A recent lakebed grant (originally adopted in the 1983-85 budget, section 2059, and subsequently adopted as a separate bill in 1985 Wisconsin Act 81) specifies various types of development on lakebed which we believe are not consistent with the Supreme Court's standards. Examples in this grant included senior citizen subsidized rental housing and associated parking and 'low and medium-rise building development' (housing, commercial, or office development including hotels or convention centers). We do not see where these types of uses can be reasonably construed to be publicly controlled buildings for a public purpose related to navigation or recreational use of the lake.

3. City of Racine: The area in question was granted to the city in 1983 Wisconsin Act 162 for public park facilities, boat basins, docks, wharves, structures, roads and public facilities. The grant allows the City of Racine to convey all or a portion of these lands to Racine County for the same purposes. While some of the wording in the grant is admittedly vague, there is no indication that the grant was intended by the legislature to allow uses inconsistent with the Supreme Court decisions. There has been a recent proposal to construct a marina administration building with a "first class restaurant" on the second floor in a portion of this lakebed grant area. We have taken the position that this proposal is a concern, whether or not the restaurant would be county-operated or run by some private entity under contract or agreement with the county. We are also aware of a proposal to construct condominiums in the grant area and we have recently found that there are existing buildings owned by the Wisconsin Natural Gas Company which are already constructed on filled
lakebed. All of these are essentially private uses of lakebed which are inconsistent with the public trust.

The above list is probably not exhaustive by any means. As indicated above, we have found certain existing development which we feel doesn't comport with the applicable legislative grant and there may well be others. On the other hand, it appears to us that the great majority of lakebed grants are made for legitimate public purposes and most development in these areas is consistent with the purposes of the grant.

One problem with lakebed grants is the issue of who is responsible for policing development to ensure its consistency with the stated legislative purpose. It seems clear that the municipality receiving the grant has the primary responsibility. Since the Department lacks most of its usual authority in these areas, the State's ability to act to ensure proper development when a municipality does not properly supervise development appears to be limited to civil actions filed on behalf of the State by the Attorney General. Needless to say, this can be a relatively cumbersome and difficult process and it is more likely to be applied in a "corrective" manner than in time to prevent development which is contrary to the public trust doctrine.

I hope that this information is responsive to your request. Please let me know if you have further questions or concerns.

RR:hf

Attach

cc: George Meyer  AD/5
    Paul Heinen  AD/5
    Jim Kurtz   LC/5

8866H
A number of questions have arisen recently regarding the permissible uses of submerged lakebed granted by the Legislature to municipalities. While these questions pertain to legislative lakebed grants, the same principles generally apply to all waterways (not just the Great Lakes) since both the Legislature's and the Department's powers to authorize development on lake and river bed are limited by the "Public Trust Doctrine" (Article IX, Section 1, Wisconsin Constitution, as interpreted by the Wisconsin Supreme Court). Of course, the Department's powers to authorize lakebed development are more limited in scope than those of the Legislature due to the applicability of the statutes which we administer.

General information regarding permissible uses of submerged lakebed is attached for your information. The most quotable item is a letter from former Attorney General Bronson LaFollette to State Representative Neubauer. The following are responses to specific questions which have been raised by Southeast District:

1. Is "para-sailing" an allowable use of lakebed which was granted to a municipality for "public park, parkway and highway purposes?"

Para-sailing is essentially a navigation-oriented recreational use of a waterway. While it is more demanding of surface water space than many other such uses, it still doesn't differ in principle from the status accorded to boating or water-skiing. Recreational uses are generally consistent with the concept of public parks and would be appropriate in this instance if they were clearly under the control of Milwaukee County (the grantee of the lakebed). Such control would have to be clearly stated in any concession agreement or other legal arrangement allowing this use to take place. Surface water use conflicts could arise and would have to be addressed at the time they occur, perhaps through local regulation.

2. Would a "fast-food restaurant" be permissible on submerged or filled lakebed granted to a municipality for "public park, parkway and highway purposes?"

Restaurants, unless an integral part and clearly intended to serve only the patrons of an allowable use of lakebed are not, in themselves, permissible. The reasoning for this is spelled out in the attached materials, in particular, the letter from Attorney General LaFollette to Representative Neubauer. We would not draw any distinction between a "first-class restaurant" and a "fast-food restaurant" for that purpose.

Incidentally, a number of other non-public uses of lakebed (e.g., condominiums) are also contrary to guidelines established by the Supreme Court. Because of a particular situation in Milwaukee where it appears that several legislative lakebed grants overlap, I also want to address the question of what uses of lakebed would be allowable in such a case (predicated on the assumption that all uses authorized in the grant are constitutionally permissible). Where two or more legislative lakebed grants apply to the same area, we should presume that all uses allowed by
the grants would be acceptable in that common area. If the Legislature had intended to limit uses to those spelled out in just one of the grants, it would presumably have provided for that in the more recent grant(s).

Reviewed by:

Scott Hausmann

Michael Cain

RWR:sm
Attach.
cc: George Meyer - AD/5
Jim Kurtz - LC/5
9066K
CORRESPONDENCE/MEMORANDUM

August 13, 1986

The Honorable Joseph Strohl
Wisconsin Senate
Room 331 South
State CAPITOL

Dear Senator Strohl:

You recently contacted me concerning the proposed marina development in the City of Racine. Some controversy has apparently developed concerning the City's proposal to include a large restaurant facility in one of the marina buildings which is to be constructed on publicly owned lakebed. As you are aware, contents have been made by Department staff that such a use of the lakebed area may violate the public trust doctrine.

You have been contacted by Michael A. Vidian, an alderman from the city of Racine, who has asked whether a privately owned ship could be anchored at one of the piers and be used as a restaurant facility. You have inquired whether such a ship would comply with the "public trust doctrine".

I have conferred with the Department's legal staff concerning this issue. It is their opinion that the "restaurant ship" would have essentially the same problems as the upland proposal. The public trust doctrine relates to navigable waters as well as the bed underlying those waters, and the use of an area of the navigable waters by a restaurant ship anchored adjacent to a pier interferes with the public's trust just as surely as if the restaurant ship were placed on top of fill material.

The Attorney General, in an opinion rendered in 1974, opined that a boat anchored in a waterway could, under certain circumstances, be considered a prohibited structure in violation of the public trust. The Attorney General stated, "Use of the bottom is permitted for purposes of anchoring [a] boat while it is being used in connection with the exercise of... public rights." 63 Opinions of the Attorney General 601 (1974). It is the opinion of our legal staff that the use of lakebed areas for restaurant or other commercial purposes does not constitute the exercise of public rights and is not a permitted use under the public trust doctrine.

The Attorney General responded to a similar question concerning the Racine lakebed proposal in a letter dated July 22, 1983, to Representative Jeffrey Neubauer. That letter contains a more complete discussion of these issues. I have attached a copy for your information.

I trust this information answers your questions concerning this proposal. Please contact me if you have additional questions concerning this matter.

Sincerely,

C.D. Besadny
Secretary

CDB:MJC:cal
cc: Representative Jeffrey Neubauer
July 28, 1986

Mr. Carroll D. Besadny, Secretary
Wisconsin Department of Natural Resources
P.O. Box 7921
Madison, WI  53707

Dear Buzz:

There has been much controversy regarding the construction of a privately owned restaurant at Racine's harbor site. I have been contacted by Michael A. Vidian, Alderman, City of Racine, concerning this matter. Mr. Vidian lives at 1116 Florence Avenue, Racine 53402.

It has been stated that the construction of a restaurant would create legal difficulties due to the Public Trust Law. The law does not allow the use of lakebed property for this type of venture.

As a restaurant would be needed to compliment the new harbor facility, Mr. Vidian has suggested using a privately owned ship anchored at one of the piers. The restaurant-ship would then not be part of the landsite itself.

Mr. Vidian would like to know if this type of restaurant would comply with the Public Trust Law and harbor regulations.

I appreciate your consideration of this matter and look forward to your response. Please send your reply to my district office at 603 Main Street, Room 201, Racine 53403.

Sincerely,

JOE STROHL
State Senator
JS/gm/mn

c: Michael A. Vidian, Alderman
Representative Jeffrey Neubauer
July 22, 1983

The Honorable Jeff Neubauer  
State Representative  
108 North, State Capitol  
Madison, Wisconsin 53702

Re: Racine Lakebed Development

Dear Representative Neubauer:

You have requested my comments on the City of Racine's proposal to engage a developer to construct a private marina development on the bed of Lake Michigan. Specifically, you ask: (1) whether the proposed private development would violate the public trust doctrine, and (2) whether legislation is needed to grant lakebed for this development.

Since the proposed project is in its infant stage, we do not yet have enough information to determine whether the marina development is consistent with the public trust doctrine. I can, however, explain the guiding principles of the public trust doctrine which should govern the Legislature's and court's future determinations on the constitutionality of the project. These principles are not statutory; they have instead been carefully developed and refined over the years through scores of court cases construing Wisconsin Constitution article IX, section 1. This provision, which came verbatim from the Northwest Ordinance of 1787, provides the constitutional foundation for the "public trust" doctrine--that the state holds the beds of navigable waters in trust for use by all of its citizens:

Jurisdiction on rivers and lakes; navigable waters. SECTION 1. The state shall have concurrent jurisdiction on all rivers and lakes bordering on this state so far as such rivers or lakes shall form a common boundary to the state and any other state or territory now or hereafter to be, formed, and bounded by the same; and the river Mississippi and the navigable waters leading into the Mississippi and St. Lawrence, and the carrying places between the same, shall be common highways and forever free, as well to the inhabitants of the state as to the citizens of the United States, without any tax, impost or duty therefor.

Without going into a detailed discussion of what this trusteeship entails, reference to a few cases early in Wisconsin's statehood establishes the following basic principles.

First, the Legislature has the duty to administer the public trust in navigable waters for the benefit of all the people of the State of Wisconsin. While the Legislature may delegate administrative tasks to carry out its public trust responsibility, it may not delegate complete control over any state navigable waters, or any portions thereof, or otherwise abdicate its public trust responsibilities.

Second, the Legislature is powerless to divest itself of public trust lands, even if under the rubric of "public purpose"--such as economic growth or local development. As stated in Priewe v. Wisconsin State Land & Imp. Co., 103 Wis. 537, 549-50, 79 N.W. 780 (1899):
The legislature has no more authority to emancipate itself from the obligation resting upon it which was assumed at the commencement of its statehood, to preserve for the benefit of all the people forever the enjoyment of the navigable waters within its boundaries, than it has to donate the school fund or the state capitol to a private purpose.

The Legislature, thus, may grant lakebed to municipalities, but these grants are revocable and must be conditioned on use of the lakebed in ways that further public trust purposes. For example, the Legislature frequently deeds submerged lands to municipalities, but the deed is conditioned on the municipality’s maintenance of the land for park or recreational uses.

Third, although the public trust was originally conceived to protect public rights in navigation, what constitutes a "public trust purpose" has expanded since statehood to include public uses beyond navigation: recreational water uses, pleasure boating, swimming, and the enjoyment of scenic beauty, to name a few. But "public trust purpose" cannot be simplistically equated with the "public interest," which is much broader in scope. For example, in 1971 the City of Kenosha sought to amend its lakebed grant to delete the restriction "for public park purposes" and substitute any purpose, as long as it was "in the public interest." At that time, my predecessor advised the Wisconsin Senate that the public trust purposes must prevail, area that a mere "public interest" requirement in the legislation would not suffice: "Because the use and enjoyment of submerged lands at Lake Michigan's shoreline are involved, any determination of public interest, whether it be by the legislature or delegated body, is subject to limitations imposed by the public trust doctrine," 61 Op. Att'y Gen. 131, 132 (1972) (emphasis added). This makes sense, because almost any permanent invasion of public trust waters could be justified by a short-term public interest. The Wisconsin Supreme Court has made it clear that the state's navigable waters must be preserved for public trust purposes.

Keeping these principles in mind, I will tie them to Racine's proposal in a way that I hope will guide you and other decisionmakers in determining whether, as Racine's proposal develops, it will meet constitutional requirements.

Because the Legislature cannot divest itself of its public trust responsibilities and may only allow a limited delegation of those responsibilities, the issue of who retains control of public trust lands becomes extremely important. Several Wisconsin Supreme Court cases have examined the validity of delegation of public trust authority to local governments and administrative agencies (usually DNR); I am aware of no case that allows a municipality to completely relinquish public control of lakebed or navigable waters to private individuals or corporations. On the contrary, in State v. Public Service Comm., 275 Wis. 112, 81 N.W.2d 71 (1957), the Wisconsin Supreme Court outlined the factors it considered in evaluating Madison's request to build a civic center on the filled lakebed of Lake Monona, the first of which was: "1. Public bodies will control the use of the area." 275 Wis. at 118. Public control is not the same as providing public access to restaurants, stores, shopping areas or walkways incident to a marina, nor is it consistent with private ownership and control of boat slip facilities.

Of equal concern to the public control issue is whether the proposed development will further public trust purposes. Again, restaurants, stores and other commercial development may innure to the public interest in general because they provide economic growth, but when they are built on lakebed, public trust restrictions prevail. The purposes of these commercial enterprises are unrelated to public trust uses; they are primarily economic (even though one may incidentally enjoy the scenic beauty of Lake Michigan while dining), and they fall outside of any of the traditionally recognized by the public trust doctrine. Stated another way, the supreme court in Public Service Comm., 275 Wis. at 118, required that "[n]o one of the public uses of the lake as a lake will be destroyed or greatly impaired. Lake includes lakebed even filled-in lakebed; non-public trust uses of lakebed impair the proper use of the lakebed consistent with public trust doctrine.

In conclusion, since the Legislature is the trustee of the state's navigable waters and underlying lakebeds,
legislation is needed to accomplish Racine's lakebed development proposal, and the legislation must be in accord with the public trust doctrine principles outlined in Wisconsin law. In *State v. Village of Lake Delton*, 93 Wis. 2d 78, 93, 286 N.W.2d 622 (Ct. App. 1979), the court cautioned that "courts are not bound by declarations of public purposes underlying legislation which affects navigable waters." Indeed, the public trust doctrine has evolved through judicial construction, and courts have the ongoing duty to "limit or rescind actions taken by the state or the state agencies in violation of the trust." *State v. Deetz*, 66 Wis. 2d 1, 11, 224 N.W.2d 407 (1974). Thus, the courts as well as the Legislature play an important role in preserving the constitutional public trust doctrine thereby insuring that navigable waters will remain "forever free" to all Wisconsin citizens.

Sincerely yours,

Bronson C. La Follette  
Attorney General

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2. *Muench v. Public Service Comm.*, 261 Wis. 492, 515-1, 53 N.W.2d 514,


5. Section 30.38, Stats., provides for the leasing of a municipality's harbor lands and facilities, but the municipality must retain ultimate control to insure the day-to-day operation of the harbor. See sec. 30.38(6) and (8)(c), Stats.

BCL/sld
June 8, 1983

Honorable Jeffrey Neubauer
State Assembly
108 North
CAPITOL

Re: Assembly Bill 452 - Lake Bed Grant to the City of Kenosha

Dear Representative Neubauer:

This is in response to your request of June 7, 1983, for an opinion concerning the constitutionality of the proposed budget amendment (similar to Assembly Bill 452) to convey lake bed to the City of Kenosha. I have reviewed the proposed legislation and have conferred with the Attorney General's office concerning this matter. The Attorney General's office is in agreement with the opinion contained herein.

The proposed legislation contains provisions for the use of lake bed for the purposes of developing:

1. "a public marina and promenade";
2. "senior citizen subsidized rental housing" and associated parking facilities; and
3. "housing, commercial or office development including, without limitation, hotels, convention centers and related facilities."

It is my opinion that only the first of the above described classes of contemplated development may be permissible under the public trust doctrine of Wisconsin water law. It is clear that the public trust doctrine as derived from the Wisconsin Constitution would preclude the development of housing and commercial or office development contemplated under (2) and (3), above.

A very brief synopsis of the Wisconsin public trust doctrine may assist in your review of our conclusions. The Wisconsin Constitution, Article IX, Section 2, provides, in part, that all rivers and lakes in the state "shall be common highways and forever free, as well to the inhabitants of the state as to the citizens of the United States, without any tax, impost or duty therefor." Out of this provision has grown the concept that all navigable waters and the beds of those waters are "held in trust" by the State of Wisconsin for all citizens. See Muench v. Public Service Commission, (1952) 261 Wis. 492, .53 N.W. 2d 514, for a discussion of the trust doctrine.

Over the years, the Wisconsin Supreme Court has broadened the scope of public rights protected by the trust to include public fishing, recreational boating, hunting, the enjoyment of scenic beauty and other public uses of water besides navigation. Muench; State v. Public Service Comm., 275 Wis. 112, 81 N.W. 2d 71 (1957). What has remained constant, however, is the cardinal rule that the trust is to be administered "so as to preserve to the people forever the enjoyment of the water of such lakes, ponds and rivers.... " Illinois Steel v. Bilot, 109 Wis. 418, 84 N.W. 855 (1901).
It has further been held by the Court that the Legislature may authorize limited intrusions into this public trust when public bodies will control use of the area, the area will be devoted to public purposes and open to the public, and none of the public uses of the lake as a lake will be destroyed or greatly impaired. See State v. Public Service Commission, (1957) 275 Wis. 112, 81 N.W. 2d 71. It has also been held that the state has to right to make a grant for private purposes or where a private person or entity will benefit from such grant. See Prieve v. Wisconsin State Land and Improvement Co., (1896) 103 Wis. 537, 79 N.W. 780.

It is my opinion that the proposed development of "subsidized rental housing" and "housing, commercial or office developments" including "hotels and convention centers" clearly does not meet the public trust criteria established by the Court.

The drafters of this legislative proposal have apparently attempted to meet the constitutional standards by providing that the project will "allow public control over the majority of lands" and arguing that these types of housing and commercial developments are necessary to finance the public marina and promenade development. The use of the lake bed, as well as who controls it, are the primary factors in determining whether or not a proposed grant is consistent with the trust. The proposed legislation is deficient in meeting either the "public use" or "public control" standard. Furthermore, an activity which is otherwise proscribed by the Constitution, i.e., building housing or commercial developments on public lake bed, cannot be permitted under the theory that the funds generated by such proscribed activity will ultimately be put to a "public purpose." Such an interpretation would render the standards established by the Wisconsin Supreme Court meaningless since virtually any development adding to the local tax base could be claimed to support a constitutionally permissible, publicly financed use.

The Court, in reviewing a past attempt by the Legislature to grant lake bed for a private use, held that the Legislature cannot give away or lease what it does not own, stating:

[T]he state is powerless to divest itself of its trusteeship to the submerged lands under navigable waters ... the legislature has no more authority to emancipate itself from the obligation resting upon it... than it has to donate the school fund or the state capitol to a private purpose." Prieve v. Wisconsin State Land and Imp. Co., 103 Wis. 537, 548-49, 79 N.W. 780 (1899). (Emphasis added)

In summary, the proposed legislation would not be constitutional insofar as it conveys submerged lands for purposes unrelated to the exercise of public rights in navigable waters, i.e., for development of housing, office or commercial developments. Conversely, those portions of the bill which relate to the use of submerged lands for public marina and park facilities would, with proper limitations, meet the constitutional public trust requirements.

If you have any further questions concerning this proposed legislation, please call me at 266-3695.

Sincerely,

BUREAU OF LEGAL SERVICES

James A. Kurtz
Director

cc: Rep. Thomas Loftus
Rep. Joseph Andrea
C. D. Besadny
June 6, 1983

Mr. Carroll Besadny, Secretary  
Dept. of Natural Resources  
101 S. Webster  
Madison, WI

Dear Secretary Besadny:

I understand that there may be a proposed agent to the budget that is similar to A.B. 452, relating to new uses for a lakebed grant ceded to Kenosha by the state. These new uses include private use of the ceded area. I am concerned that these uses may violate provisions of the state constitution. Please ask your legal staff to provide me with an analysis of this issue.

Sincerely,

JEFFREY A. NEUBAUER  
JAN/i  
cc: Rep. Andrea
June 1, 1983

Honorable Jeffrey Neubauer
State Assembly
State Capitol
Madison, WI 53702

Re: Marina Development - Sam Meyers Park          Racine

Dear Representative Neubauer:

You have asked Michael Cain of my staff to review the materials you submitted concerning legislation relating to the proposed marina development at Sam Meyers Park in the City of Racine. It is somewhat difficult to determine, from the letters you submitted, precisely what is proposed in this development. There is, however, sufficient information to enable me to confirm that portions of the proposal would be inconsistent with the Wisconsin Constitution.

A very brief synopsis of the Wisconsin public trust doctrine may assist in your review of our conclusions. The Wisconsin Constitution, Article IX, Section 1, provides, in part, that all rivers and lakes in the state "shall be common highways and forever free, as well to the inhabitants of the state as to citizens of the United States, without any tax, impost or duty therefor." Out of this provision has grown the concept that all navigable waters are "held in trust" by the state for the public. See *Muench v. Public Service Commission*, (1952) 261 Wis. 492, 53 N.W. 2d 514, for a discussion of the trust doctrine.

It has further been held that the Legislature may authorize limited intrusions into this public trust area where public bodies will control use of the area, the area will be devoted to public purposes, and none of the public uses of the lake as a lake will be destroyed or greatly impaired. See *State v. Public Service Commission*, (1957) 275 Wis. 112, 81 N.W. 2d 71. It has also been held that the state has no right to make a grant for private purposes or where a private person or entity will benefit from such grant. See *Prieve v. Wisconsin State Land and Improvement Co.*, (1896) 103 Wis. 537, 79 N.W. 780.

In light of the above, the portions of the proposal which I believe would be constitutionally proscribed are:

1. The proposed construction of a multipurpose building which will "house a first-class restaurant, a separate lunch room type restaurant, and a ship's supply store."

   The restaurants, especially the "first class restaurant", are not necessary support facilities for a public marina and would not meet the public purpose test outlined above. I believe that the "ship's supply store" may be acceptable if its focus is to serve the marina facility rather than being a commercial establishment intended to serve a larger geographic area.

2. The proposal to lift the "public use restrictions" on the lake bed areas and to, apparently, "grant to Mr. Smolenski the rights in certain submerged lands."

   The Legislature has the authority to make a grant of lake bed, which is held in trust by the State of Wisconsin for the people of the State, only so long as the area will be devoted to public purposes and open to the public.
Thus, the public use restrictions must remain intact to have a constitutionally valid grant of the lake bed.

Furthermore, it is clear under Wisconsin law that lake bed cannot be granted to an individual for possible personal gain but, rather, must be under the control of public bodies. This would not preclude a lease or other operating arrangement between the city and Mr. Smolenski, but it would preclude conveyance of title to a private party such as Mr. Smolenski.

I hope this response is useful. The analysis contained herein is necessarily cursory and I would suggest that further discussions might be useful when a more well defined proposal is available.

If you have any questions, please call Michael Cain at 266-2177.

Sincerely,
BUREAU OF LEGAL SERVICES

James A. Kurtz
Director

cc: George Meyer ADM/5
    Kris Visser ADM/5
    Bob Roden - WRZ/5
    Southeast District
DATE: December 6, 1988

TO: District Directors (WMC)
   PMMS Response
   Insertion: Ch. 60 of the Water Regulation Handbook

FROM: Scott Hausmann, WZ/6

Distribution: WRZ Program Staff

SUBJECT: DNR Authority to Grant or Deny Section 401 Water Quality Certification Behind Bulkhead Lines and In Lakebed Grant and Lease Areas - Standing to Grant or Deny Retained

We have been asked whether the Department retains authority to grant or deny s. 401 Water Quality Certification in three areas:

1. Behind bulkhead lines (s. 30.11, Stats.)
2. In lakebed grants to municipalities on Lake Michigan (s. 30.05, Stats.)
3. In lake or streambed leases (s. 24.39, Stats.)

In all three cases either the Department or the state legislature has permit or licensing authority which regulates the filling of these areas. For bulkhead lines and leases the water quality component of a general public interest test must be satisfied for filling to be authorized [ss. 24.39(4)(c) and 30.11(2) stats.]. In the case of lakebed grants, limitations on the type of fill material are generally not explicit. However, there is a presumption that materials which constitute solid waste may not be deposited in state waters. Accordingly, we should grant or deny water quality certification for filling based on consistency with bulkhead line permit conditions, lease terms or legislative grant limitations related to water quality an the solid waste provisions of ch. 144 stats. Certification may only be denied based on permit or lease conditions or legislative grant terms related to water quality (not those related to general navigation, use limitations or other criteria not directly related to water quality). We must not waive water quality certification since the state meets the tests for Section 401 standing, i.e. 1) regulatory jurisdiction to limit the filling of these areas and 2) water quality standards that apply.

Related Guidance: None

Requested By: Vic Pappas
Drafted By: Michael Dresen
Reviewed By: Ken Johnson - WZ/6
Mike Cain - LC/5

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GUIDANCE PURPOSE AND DISCLAIMER

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance cannot be relied upon and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes, common law and administrative rules to the relevant facts.

This file is an electronic version of a chapter of the Waterway and Wetland Handbook. This document was scanned from the master handbook chapter kept at the Bureau of Fisheries and Habitat Protection central office in Madison. All effort was made to ensure this scanned electronic copy is an actual copy of the hardcopy document. Due to the electronic scanning process, there may be rare instances of typographical errors, omissions or improperly formatted pages. Please refer to the master handbook if accurate transcription is required.

A. PURPOSE

The construction or maintenance of structures in navigable waterways can seriously affect the environment and public rights or interests. Throughout the State's history, the degree of regulation and control over structures in navigable waterways has gradually increased in order to preserve and protect the waterways.

B. MECHANISM

Section 30.12, Wis. Stats., requires a person to obtain a permit prior to placing structures in navigable waters. Also see Chapter 80, Bridges and Chapter 85, Culvert Waterway Crossings, for a discussion of highway structures and private waterway crossings (these chapters will be combined to address s. 30.123, entitled "Bridge Construction and Maintenance").

C. HISTORY

Various cities and villages were authorized by statute to regulate waterway modifications and control structures long before the state adopted regulatory controls. One example is Chapter 134, Private and Local Laws of 1856, that granted the City of La Crosse, in its incorporation charter, the power "to regulate the construction of piers, docks, wharves and levees extending into the Mississippi River.” Another example, Chapter 179, Private and Local Laws of 1856, authorized the City of Milwaukee to establish dock lines. These powers were also often granted separately by the legislature to municipalities and were not enumerated in their general and specific powers identified in the statutes.

Some Supreme Court cases help to provide us with an understanding of the attitudes concerning these
activities at an early time in the state's history. The case of Walker vs. Shepardson, 4 Wis 486 (1855), dealt with the construction of wharves and "dock lines" in the Milwaukee River in the City of Milwaukee. The site involved in the decision was at the confluence of the Menomonee River and Milwaukee River where "...the river, at the point in question, and for a considerable space thereabout, spread out over a large surface, making a sort of marsh covered with water to a depth of from one to three feet..." Many underwater lots were plotted out involving several city blocks. The lots were all within the meandered lines of the rivers as determined by the government survey. The complainant, Walker, had built a "dock" of piling and timbers, dredged the river and filled in his lots and the space between his lots and the meander line of the Milwaukee River. The City of Milwaukee had established a dock or wharf line by ordinance on May 5, 1853, that coincided with the meander line. He complained that Shepardson was "wrongfully and unlawfully blocking up and obstructing the channel of said Milwaukee River, in front of complainant's lots, by driving timber or piles into the bed of said river, and by filling up and stopping said river by logs, timbers, spars, gravel, etc.,... extending into the channel thereof more than 50 feet beyond the said dock line..." Shepardson actually was constructing his "dock" along his lot lines and the dock line had been established across one of his lots. He denied that he would "block up and obstruct the navigable channel" of the river, that the complainant's dock "is at least 100 feet west of where it should be for the purposes of navigation and commerce;" and "there is not, even now, four feet of water between said proposed dock and the navigable channel of the river until you get out over 100 feet further east, and towards the center of the river."

The court made the following comments; "Both the complainant and the defendant as such owners, have the right to use their land that is covered by the water of the river, in any way compatible with the use of the stream for the purposes of navigation; but this they cannot interrupt. They may therefore construct docks or landing places for goods or passengers, taking care that vessels employed in navigating the stream are not impeded in their passage, nor prevented from the use of all parts of the stream that are navigable." "We think it certain that the rights of the complainant, as a riparian owner, will not be impaired by the improvements that the defendant has commenced." "The complainant, it appears, instead of constructing his dock along the margin of the river on the line where the water becomes sufficient depth to permit vessels to navigate it, has built his dock where excavation of the earth was necessary in order to permit vessels to approach it." "The testimony... is very conflicting, and by no means sufficient to warrant the interference of a court of chancery to prevent the defendant from proceeding with the construction of his dock."

In Diedrich vs. the N.W.V. Ry. Co., 42 Wis. 248 (1877), the court held that "a riparian owner upon navigable water,...unless prohibited by local law, has a right to construct in shoal water, in front of his land, proper wharves or piers, in aid of navigation, and at his peril of obstructing navigation, through the water far enough to reach actually navigable water; this being held to further the public use of the water, to that the public title under the water is subordinate; and therefore to be, in the absence of prohibition, passively licensed by the public and not a purpresture."

In Larson and Others vs. Furlong and Others, 50 Wis. 681 (1881), Larson had constructed a rock filled timber crib dock 140 feet long, 16 feet wide disconnected from and 20 feet from the low water mark of Lake Michigan. He was not a riparian owner, but intended to connect his dock with a public highway that was supposed to have been lawfully laid out by proper authorities. Furlong claimed it was a private and public nuisance since it was not authorized by law and removed the dock himself. In commenting on the case the court said. "If the dock had been used in the way it was intended to be, it would not have been a public nuisance. Such use would have been in aid of commerce and navigation, and lawful...unless so constructed as to unnecessarily obstruct the navigation of the harbor." This conclusion would not have been reached under current statutes.

Although municipalities had generally been granted substantial powers to control the construction of structures and "dock lines" in navigable waters, the legislature continued to authorize piers, docks, other structures and "dock lines" through adoption of session laws.
While the legislature and municipalities had the authority to authorize these activities, the state regulations that were being developed were primarily enforcement provisions.

The Department and its predecessor agencies have held that it was not prohibited to build structures such as boathouses in navigable waters prior to enactment of s. 30.02(1)(b), by Chapter 455, Laws of 1933, that reads: "It shall be unlawful to deposit any material or to place any structures upon the bed of any navigable water where no shore line has been established or beyond such shore line where the same has been established."

Historically, some buildings constructed on the bed of streams were held by our Supreme Court to be a legal use of an individual's property since the Court considered some of these streams to be non-navigable. The Court held these streams did "not materially obstruct existing navigation." [See State v. Carpenter, 68 Wis. 165 (1887); Janesville v. Carpenter, 77 Wis. 288 (1890); State v. Sutherland, 166 Wis. 511 (1918) and S.S. Kresge Company v. Railroad Comm., 204 Wis. 479 (1931) for an understanding and explanation of this era of our history.] The Court in Kresge noted, however, that if the river (the Rock) is in the future considered navigable in fact, the State could then seek removal. The general presumption, therefore, is that structures built before the specific prohibition of 1933 were subject to the State's "trust" protection and could be pursued as violations unless they were in aid of navigation.

Other sections of the statutes could have been used to control or prohibit the placement of structures prior to 1933. In 1841, the Territorial Legislature adopted Act No. 9 that declared meandered rivers and streams "navigable to such an extent that no dam, bridge, or other obstruction may be made in or over the same without the permission of the legislature." The Revised Statutes of 1878 established penalties for obstructing navigable streams. Chapter 652, Laws of 1911, established penalties for obstructions "in or over a navigable waters of this state in violation of the provisions of this section." Although this amendment expanded the penalty section to include lakes for the first time, there was no statutory prohibition against placing obstructions in lakes - only streams. Chapter 474, Laws of 1917, corrected this inconsistency in the law through revision, consolidation and renumbering of the statutes. Section 31.23, was created to read: "Every person or corporation that shall obstruct any navigable waters and thereby impair the free navigation thereof...shall forfeit for each such offense...a sum not exceeding fifty dollars." Section 31.25, was also created by the 1917 Law. It declared obstructions constructed or maintained in violation of the provisions of the chapter to be nuisances subject to abatement.

While these statutes were cited on a limited basis to prohibit or control the construction or maintenance of some fills and structures, the legislature apparently felt a more definitive prohibition was in order, thus the enactment of s. 30.02(1)(b), (the forerunner of s. 30.12) in 1933. The total prohibition of structures in navigable waters resulting from adoption of that section created a dichotomy in the law. The common law rights of riparian owners to place certain structures such as piers in navigable waters were clearly established by the courts, yet this new law seemed to prohibit any structure even if it was in aid of navigation.

To handle this apparent conflict the Railroad and Public Service Commissions interpreted the statutes referring to structures and obstructions in navigable waters as referring to unlawful structures that actually interfered with navigation and the rights incident to navigation or was contrary to the trust doctrine.

**First Provisions for Issuing Permits**

When s. 30.02 was amended by Chapter 335, Laws of 1949, providing for the Public Service Commission to authorize structures, the commission adopted the same policy. Although it may seem that the commission was shirking its responsibility, the Supreme Court in Bond v. Wojahn, 269 Wis. 235 (1954), said:
The construction given the statute by the commission is practical and it has been in force for many years, particularly under the provisions of Chapter 31, Stats. We concur in its interpretation of the statute. (Emphasis added.)

It must be kept in mind that literally thousands of piers and docks had been or were being constructed in navigable waters. In addition, many boathouses had been built before 1933. Either the boathouses were considered to be aids to navigation, even though many of them included living quarters, or enforcement was not pursued since there was no clear statutory prohibition of structures in lakes prior to 1933. After adoption of the structure prohibition, many enforcement actions were taken in response to complaints about boathouses. The 1949 amendment of s. 30.02 continued the general prohibition of placing structures or deposits in navigable waters, but creation of s. 30.02(1)(b) established a mechanism for approving them by adding the following:

...provided, however, that the public service commission may grant to any riparian owner the right to build a structure, or to maintain a structure already built and now existing, for his own use, if the same does not materially obstruct navigation.

After the 1949 amendment, permits were issued for structures, including boathouses and buildings (but excluding wharfs and piers) only insofar as the statutory standard, "if the same does not materially obstruction navigation," was met.

Chapter 712, Laws of 1951, modified s. 30.02(1)(b), by adding these additional standards: "or reduce the effective flood flow capacity of the stream or is not detrimental to the public interest." A revisors note to that legislation indicates that the language was recommended by the Public Service Commission (PSC) because the original statute allowed findings solely on the effect of the proposed obstruction on navigation, whereas flood capacity and other public interests could be as important as navigation.

Chapter 523, Laws of 1957, created s. 30.02(1)(ba), to provide a simple mechanism for the approval of sand blankets. The Conservation director was to have the proposal inspected and filed a report with the PSC. If the PSC did not deny the proposal within 10 days after receiving the report, approval was deemed granted.

Chapter 441, Laws of 1959, repealed Chapter 30, and certain sections of Chapter 31, and renumbered and amended them to create Chapters 30 and 31 in the form we have today. Section 30.02(1)(b) was renumbered as s. 30.12(2)(a), and s. 30.02(1)(ba) was renumbered as s.30.12(2)(b). This chapter, through creation of s. 30.13, also recognized by statute, for the first time, the common law rights of riparian landowners to build wharves and piers.

Chapter 366, Laws of 1961, created s. 30.12(3), the forerunner to the current penalty section, s. 30.12(5).

Chapter 614, Laws of 1965, created the Department of Resource Development as a forerunner to the Department of Natural Resources, which was to be created at a later date. Any reference in Chapters 30 and 31 to the PSC was changed to refer to the Department of Resource Development.

Chapter 276, Laws of 1969, abolished the Department of Resource Development and created the Department of Natural Resources. References in the statutes to the Department of Resource Development were changed to refer to the Department. Language in the sand blanket provision referring to the conservation director was dropped as was the time limitation for denial of a permit.

Chapter 250, Laws of 1975, created subsections 30.12(2)(c) and (d) of the statutes relating to the issuance of permits for the installation of fish cribs and riprap.
Chapter 421, Laws of 1975, removed language that was considered discriminatory on the basis of sex. In s. 30.12, "the owner's property" was substituted for "his property," etc.

Chapter 130, Laws of 1977, modified s. 30.12(1), and created s. 30.12(4) to clarify that the Department of Transportation (DOT) activities in relation to highway construction were exempt from various statutory permit and approval requirements. It also required DOT projects to be accomplished in accordance with interdepartmental liaison procedures established between DOT and DNR. The liaison process is handled by the Bureau of Environmental Analysis and Review.

Chapter 190, Laws of 1977, created s. 30.123, which exempted municipalities from structure permits for highway construction if it was performed in conformance with standards developed by DOT. These standards were adopted as TRANS 207, Wis. Adm. Code, and became effective on July 1, 1981.

Chapter 101, Laws of 1979, created s. 30.121, which established procedures for the regulation of boathouses and houseboats. Prior to adoption of this law the Department had adopted a policy of not authorizing boathouses that were constructed lakeward of the ordinary high-water mark (OHWM). NR 115.03(2)(b)(3), Wis. Adm. Code, adopted in September, 1970 stated:

Boathouses or similar structures that require a waterfront location shall not be used for habitation nor extend toward the water beyond the ordinary high-water line.

Even with this policy, problems developed because landowners wished to build boathouses over boat slips. Some permits were issued for such construction on the basis that the rule pertained to the original OHWM.

Chapter 226, Laws of 1981, amended s. 30.12, to place "minor" permit provisions in paragraph 3, added a provision for a "minor" structure permit for fords and renumbered the penalty section to paragraph 5.

Chapter 330, Laws of 1981, added DOT exemptions from city and village shoreland wetland zoning to s. 30.12(4)(a).

1987 Act 374 art. 18-23, changed notice provision to s. 30.02(3)&(4), eliminated the requirement to field investigate "minor" permits, added spawning reefs and wing deflectors to the fish crib subsection and allowed their placement in navigable waters instead of just lakes, added a "minor" permit provision for boat landings, added a "minor" provision for permanent boat shelters provided there is no "upland" boathouse within 75' of the OHWM or a boathouse over navigable water on the owners property, added a provision to allow rules to govern the number and aesthetic and architectural features of boat shelters and finally added s. 30.123 to the list of statutory exemptions for DOT.

1989 Act 31 art 685s created subsec. 30.12(4)(f) which states: "This subsection does not apply to activities in the Lower Wisconsin state riverway, as defined in s. 30.40(15)." A new s. 30.455 was created by this act to guide consultation and cooperation between DNR and DOT on DOT activities in the "riverway" in lieu of the provisions in s. 30.12(4).

D. STANDARDS

1. STATUTORY STANDARDS.

a. Major Permits: Section 30.12(2) is the subsection used for authorizing "major" structures such as pile clusters, wingdams, breakwaters, etc., that are more likely to impact on the environment or water use. The standards of s. 30.12(2) are:
1) "The Department may...grant to any riparian owner a permit to build or maintain for the owner's use a structure otherwise prohibited sub. (1)...."

Although this language may seem to be introductory, it does provide us with two elements of legislative direction. First, the permit applicant must be a riparian landowner. Persons with an easement, lease or who are purchasing property by land contract do not qualify as riparian owners. They would have to have the actual owner apply for a permit or be authorized to serve as an agent in writing by the owner.

On a flowage, the riparian owner may be different from the owner of the flowage bed (who has no riparian rights under the law). The Department may issue a permit to a riparian even though the flowage bed owner objects, because we are bound only by the statutory standards. However, where the Department is aware that the flowage bed owner objects, the permit should require that necessary property rights be obtained before such a structure is placed. The flowage bed owner may prohibit structure placement or receive compensation for such placement. Disputes between a riparian and the flowage bed owner may have to be resolved in civil proceedings.

If an applicant must be riparian, near-shore structures must be constructed within the zone of riparian influence or control without intruding on the riparian rights of adjacent landowners.

Second, a structure may be placed in navigable water purely for private use as opposed to a public purpose. However, the private use must be consistent with the public trust doctrine. It should be kept in mind that a permit grants a revocable license to intrude on public waters. A permit does not grant a perpetual right.

Staff gages are sometimes placed by private parties in navigable waters to monitor water levels or flows. We should encourage their use and consider authorizing their placement by letter to further the purpose of s. 31.02(1). Three conditions should be placed in any authorization: whenever possible, gages should be placed on legal fixed structures, gages should be placed to avoid conflict with s. 30.12 standards, and information gathered should be provided to the Department regularly for our records.

2) A permit may be granted "if the structure does not materially obstruct navigation...."

Clearly the characteristics of the waterway involved will have a great bearing on whether a structure could be considered to "materially obstruct navigation." A large waterway such as Lake Michigan develops tremendous wave energy. It is not uncommon for massive jetties or breakwaters to be authorized that extend a considerable distance into the waterway. Due to the sheer size of the waterway, most navigation activities take place relatively far from shore and these massive structures really have little effect on navigation. On inland lakes, navigational uses tend to occur near the shore, particularly for fishing. Any significant intrusion of a structure into the waterway could disrupt established navigational patterns.

3) A permit may be granted "...if the structure does not...reduce the effective flood flow capacity of a stream."

In some instances the opinion of the experienced investigator, after evaluation of the facts and/or investigation of the project site, may clearly support this finding. In other instances hydraulic calculations may be useful or necessary to evaluate this standard.
Compliance with NR 116 does not by itself demonstrate compliance with this standard since the structure may be overtopped with no measurable diminution of flow downstream during high stream flows. At lower flood flow frequencies, structures often cause significant "backwater" or water storage accompanied by reduced downstream flow. It is reasonable to conclude that a structure reduces the effective flood flow capacity if it causes additional adverse flooding (compared to natural conditions) of upstream property that is not owned by the applicant. If one who may be adversely affected consents to diminished flood flow capacity and no adverse impacts to the resource occur, we can consider the standard met.

It is also necessary to consider what might happen downstream or within the reach of the proposed structure. Will the project cause increased flood elevations that do not directly impact an upstream landowner? Will stream velocities increase and cause channel scour and downstream sedimentation?

It usually is necessary to evaluate a whole range of flows up to the regional flood to determine if a stream's flood flow capacity (ability to carry a given flow of water at a fixed elevation) is reduced. Factors controlling a stream's flow capacity include channel roughness, stream slope and channel geometry (including flood plain overbank areas). The permit application should contain detailed plans, cross sections and perhaps hydrological and hydraulic analyses (when the conditions of NR 116.20(2)(a) or (b) apply). [See the Bridges and Culverts chapter of the handbook for the type of information that may be needed to evaluate a structure.] In any event, there must be an evaluation for compliance with Department flood plain regulations (a requirement for any permit). Make sure this information is provided when appropriate.

4) A permit may be granted "if the structure...is not detrimental to the public interest."

The Legislature has authorized the placement of structures in navigable waters for private use provided the statutory standards are met. Many factors, including the following, must be considered in order to determine if a structure installation is detrimental to the public interest:

a) Natural scenic beauty.

b) Potential for disruption of fish or wildlife habitat.

c) Impacts on wetlands or endangered resources.

d) Effects on water quality.

e) Adequacy of design, including potential for failure.

f) Lack of alternatives.

g) Compatibility with the trust doctrine.

h) Cumulative impacts.

It should be noted that this standard does not require a structure to be positively in the public interest. The question to resolve when considering a structure application is not "will any adverse effects result" but rather "will any adverse effects resulting from the structure be detrimental to the public interest." A balancing of public and private rights is required to make this determination.

Section 30.12(1) says structures or deposits in navigable waters are illegal unless a permit has been issued by the Department or they have been otherwise authorized by the legislature. This is similar to the language of the first statute authorizing permits in 1949, s. 30.02(1). At that time only deposits behind adopted shorelines (bulkhead lines) and lake bed grants were legal. There was no procedure for authorizing deposits in the statute that was to become s. 30.12. However, in 1957 the statute was modified to allow the issuance of permits for sand blankets
(a particular type of deposit).

Questions have arisen in the past whether we may issue s. 30.12 permits for deposits. The answer is only those “deposits” that are specifically enumerated.

In 1959 the statutes were reorganized to the current format and s. 30.12(2) was created. The caption for s. 30.12(2), PERMITS TO PLACE STRUCTURES OR DEPOSITS IN NAVIGABLE WATERS, was created with subparagraph 2a regulating structures and 2b regulating sand blankets. In 1981 subparagraph 3 was created for approval of “minor” permits, and sand blankets as well as other previously added "minor" activities were moved from (2) to (3). Although paragraph 2 no longer had any permit authority for "deposits", the caption was not changed and it remains today.

b. Minor Permits: Section 30.12(3), is used for authorizing relatively minor structures and deposits (sand blankets, fish cribs, spawning reefs, wing deflectors, riprap, fords, boat landings and permanent boat shelters) that normally have no significant impact on the environment or water use. The Department may deny the application if it finds the proposed structure or deposit:

1) "...will materially impair navigation."

Generally, the structures authorized under this section will not obstruct (physically block) navigation. However, they could impair navigation by reducing normal water depth. For example, fish cribs could be an unseen hazard to boaters if insufficient clearance is provided from the water surface to the top of the fish crib.

2) "...will...be detrimental to the public interest."

See narrative under s. 30.12(2).

2. ADMINISTRATIVE CODE STANDARDS.

a. NR 1.95 establishes general standards to be applied by the Department in decisions affecting wetlands. The Department shall presume that wetlands are not to be adversely impacted or destroyed and that the least overall adverse environmental impact shall result when evaluating proposals that require its approval. NR 1.95 is the predecessor to NR 103. NR 103 supersedes NR 1.95 in regulating decisions made by the Department.

b. NR 103 establishes water quality standards to be applied by the Department in decisions affecting wetlands. NR 103 further specifies the requirements to be used by the Department when determining the potential adverse effects of a project on a wetland versus the benefit to the applicant.

c. NR 115 and 117 establish standards to be followed by counties and cities and villages in their administration of shoreland and shoreland-wetland zoning ordinances. Permits should require applicants to conform with the standards established in NR 115 and 117.

d. NR 116 establishes standards to be followed by local units of government in their administration of floodplain zoning ordinances. Permits should require applicants to conform with standards established in NR 116.
e. NR 150 establishes procedures for determining whether a given project requires an Environmental Impact Statement (EIS). Structure permits may require an environmental assessment; check the type list contained in the rule.

f. NR 325 establishes procedures for maintenance, repair and removal of fixed houseboats and boathouses.

g. NR 326 establishes guidelines for construction of piers. See Chapter 80 or 85 of the handbook for additional standards and further discussion of this code.

3. LEGAL OPINIONS.

a. Fences in navigable waterways. Bureau of Legal Services opinions dated August 15, 1972, April 24, 1974 and August 23, 1974. Chapter 90 of the statutes requires adjoining landowners to maintain partition fences if either of them use their land for farming or grazing. It also provides that a fence running through waters shall be placed in equal cost shares. Since no specific authority to obstruct or place structures in navigable waters is granted, fences have not been legislatively exempted from Chapter 30 permit and approval requirements. Nevertheless, the Department has normally only taken action upon complaint. NOTE: Recommending the use of smooth wire, no electricity, marking wire with flags, posting warning signs, providing a portage or using swinging gates are some ways to minimize adverse effects of fencing. Section 30.10 may be used to authorize them.

b. Relationship between ss. 182.017 and 30.12. Bureau of Legal Services opinion dated April 23, 1973. Any corporation organized to furnish telegraph or telephone service or transmit heat, power or electric current to the public or for public purposes are legislatively authorized to place structures in navigable waters. Therefore, they are exempt from s. 30.12 permit requirements although the structures shall not "at any time obstruct or incommode the public use of any...body of water." However, permission in the form of leases or easements must be secured from private owners or the Commissioners of Public Lands as appropriate for placing structures on the bed of waterways. Section 30.20 does not contain a permit exemption similar to the one in s. 30.12, so permits would be required.

c. Temporary structures or fills. Bureau of Legal Services opinion dated September 4, 1973. Temporary structures require a permit. If they are to be used in conjunction with a permanent project that requires a permit they should be authorized in that permit. Temporary or permanent fills can only be placed provided they meet the statutory standards of and are authorized by ss. 30.11 and 24.39.

d. Placing fill or structures landward of a bulkhead line. Attorney General's opinion dated October 1, 1974. A riparian owner may place a structure or fill behind a bulkhead line without obtaining a permit pursuant to s. 30.12.

e. Depositing sand on ice for automobile races. Bureau of Legal Services opinion dated February 20, 1975. Sand placed for racing events does not violate ss. 29.29(3) or 30.12 until it melts through the ice and enters the water or reaches the bed of the waterway. To avoid statute violations sponsors should properly remove the sand after the race.

f. Placement of riprap. Bureau of Legal Services opinion dated December 19, 1978. A riprap permit is required prior to an intentional placement of riprap materials on the bed or...
bed and bank of a navigable waterway. Placement of riprap materials on the bank of a navigable waterway would not require a permit. However, highly negligent placement where the riparian owner has reason to know or knows that riprap has or will imminently rest on the bed may be within the scope of the statute and require a permit. Local zoning ordinances may require permits for riprap.

g. Unauthorized structures. Bureau of Legal Services opinion dated February 15, 1980. The presumption of "conformity with the law" in s. 30.122, applies only to structures legal when built. It merely reiterates the obvious legal principle that if a structure was legally constructed pursuant to permit, statute or common law, it is presumed to be legal at the present date.

h. Water pollution control statute. Attorney General's opinion dated May 21, 1980. The Department is required to consider the effect on water pollution in order to issue a permit under s. 30.12(2)(a), (now s. 30.12(2)). On that basis, s. 30.12 may be properly characterized as a water pollution control statute. As such, the Forest Service, United States Department of Agriculture, who believe section 404(t) of the 1977 amendments to the Clean Water Act (Pub. L. No. 95-217) only requires it to submit to state licensing under a state water pollution control statute should apply for state permits. The USFS refused to get permits from the DNR at the time of the AG opinion.

i. Authority of the State of Wisconsin to regulate federal construction. Letter from Secretary Anthony Earl to United States Department of Agriculture dated June 5, 1980. "The Attorney General concludes, based upon Reuter v. Department of Natural Resources and the history of administrative practice of this agency, that the Department is required to consider the effect of water pollution in order to issue a permit under s. 30.12."

Section 31.06 is also a water pollution control statute. Federal agencies should submit permit applications for activities regulated under ss. 30.12 and 31.06.

In addition, ss. 313 and 404(t) of the Clean Water Act require federal facilities to comply with state substantive and procedural requirements. Thus, federal activities requiring a permit from the Corps of Engineers or EPA will require any appropriate state permits.

Federal agencies must also obtain permits for activities on the state-owned beds of natural, navigable lakes.

E. PROCESS

1. APPLICATION.

Permit applications must be submitted for major and minor structures. When an application is received it should be carefully reviewed to ensure that all required information has been submitted. An incomplete permit application should be returned to the applicant with instructions on needed information. Structures requiring technical review such as hydraulic analysis (stream structures) or structural analysis (coastal structures) generally require detailed information. All appropriate staff should review such an application to identify missing or inadequate information that will need to be supplied by the applicant.
2. FIELD INVESTIGATION.

The project and site are inspected to evaluate the environmental and physical effects of the proposal, to evaluate and verify other data supplied by the applicant such as soil type, floodplain cross-sectional data, fill requirements, etc. and to determine if the proposal meets statutory standards. (See discussion under design considerations) It may be desirable to complete the field investigation prior to issuing a public notice. Investigation prior to notice would allow the Department to determine its position before expiration of the notice period in the event the Department wishes to request a hearing.

3. NOTICE REQUIREMENTS.

For any application received pursuant to s. 30.12(2), the notice and hearing provisions of s. 30.02(3) and/or (4) must be followed. In some cases where it is recognized that a hearing will be required it may be desirable to issue a notice of proposal to solicit additional public opinions, particularly when the project is suspected to be highly controversial.

A public notice is not required for an application received pursuant to s. 30.12(3).

4. DESIGN CONSIDERATIONS AND DISCUSSION.

a. Breakwaters, Jetties or Groins - Almost exclusively limited to the Great Lakes.

Breakwaters are usually massive structures built high enough to prevent overtopping during specified storm frequency events. Their purpose is to provide calm water on the leeward side for marinas, harbors, etc. Jetties and groins, on the other hand, are primarily structures designed to protect shorelines from erosion. They achieve that objective primarily by causing the buildup of littoral drift material. The build-up of a beach reduces water depth which dissipates wave energy by causing waves to break further from the erosion prone shoreline. They do not have to be much higher than normal high water elevation to be effective. One of our principal concerns should be what might happen on the "downdrift" side of such structures. Littoral drift is caused by nature's attempt to balance energy. Breaking waves and currents carry a given amount of bed material along a beach. If the supply of bed material is reduced (as would happen in the case of groins and jetties), the waves and currents pick up new material to achieve equilibrium again. The pick-up of new material can result in increased erosion to downdrift riparian owners. This effect can occur for a distance of up to 15 times the length of the groin or jetty on the "downdrift" side. When evaluating such proposals, request information on expected impacts adjacent to the project site. It could be that granting such a proposal might be "detrimental to the public interest" because of potential secondary effects. [Section 30.12 does not contain a standard for consideration of effects on adjacent riparian owners as do other chapter 30 permits.]

An evaluation of the littoral environment is required to determine the appropriateness of one of these devices on lakes as either shore protection or aids to navigation. The kind and amount of littoral drift, wave energy causing erosion and drift, and type of foundation materials are all important factors to be considered in the field investigation.

Wave energy is influenced by wind speed and direction, fetch distance (the distance over which wind works on the water surface to generate waves), near shore bottom slopes and depths, and the configuration of the shore. Points tend to concentrate wave energy, bays tend to disperse wave energy.
Foundation conditions are important in the selection of a filter for riprap or loose rock structures. A fine meshed filter cloth should be used for clay or fine grained foundation material. A relatively coarse filter cloth could be used for sand or gravel foundation material. Varying gradations of gravel may be used in lieu of filter cloth since the object of either type of filter is to hold materials in place and withstand water action.

b. **Solid Piers** - Primarily for outlying waters and harbors, but allowed in Lake Winnebago, Mississippi River and portions of the Fox River.

To withstand the extreme forces on the Great Lakes, massive permanent piers may be required to provide boat mooring areas. This is particularly true at steep rocky shorelines with deep water next to the shore. These piers generally need to conform to the requirements of NR 326. NR 326 requires an opening in the "solid" pier to pass littoral drift materials. Although it is unlikely that littoral drift will be unaffected by having an opening in the pier, if sized correctly, interruptions can be minimized (at least during more or less normal conditions). The opening size needed depends on site characteristics, including water level fluctuations, but may be on the order of 20 to 40 feet. In order to accommodate the littoral drift opening, the pier may need to be longer than what would normally be required because there still has to be an area on the lee side of the pier to provide a safe mooring area for boats.

Sometimes solid piers are designed to be multiple purpose structures. If they are intended to act as a groin or jetty to protect the shoreline from erosion, the pier standards may not be totally applicable. For example, requiring an opening to pass littoral drift would negate the shore protection purpose of the structure. When evaluating such a proposal, you must determine whether there is a need for shore protection.

c. **Sand Blankets**

Sand or other similar materials are allowed on inland lakes and flowages as deposits for the purpose of improving recreational use. Sand blankets are not allowed on rivers and streams by statute and should not be permitted on the Great Lakes. The following are guidelines for issuance of these permits:

1) The size of the allowed blanket should be appropriate to the project site and purpose. For a single family residence, a 50’ x 50’ blanket is usually sufficient; unusual circumstances may dictate a smaller or larger allowable area. Public uses (beaches, clubs) may require a significantly larger area.

2) The material used should be designed to stay in place. This usually means that pea gravel, not sand, should be used because the larger particle size is less likely to drift off site in response to wave energy. Another advantage of pea gravel is that it will more likely enhance fish and invertebrate habitat.

3) Generally, the Department has restricted sand blankets to water less than four feet deep, since that depth is considered the normal lakeward extend for wading.

4) Six inches is recommended as the maximum allowable thickness of the blanket. A request for greater thickness probably indicates that the site is unsuitable.

5) Placement of sand blanket material on ice should not be allowed on those lakes where the ice tends to move.

6) Placement of sand blanket material over muck should be carefully evaluated because of possible displacement and/or hazard to wading swimmers and anglers who might...
walk off the sand blanket and sink into and be held by the muck.

7) Plastic sheeting should not be allowed because it tends to float due to the formation of gases underneath and because use of sheeting is generally related to the need for firming up unstable lake bottoms (muck, etc.).

8) For purposes of beach retention, sand blankets should not be granted where beach slopes are steeper than 1 vertical to 8 horizontal. Steeper beach slopes are generally not stable. The sand blanket material would most often soon move off a steeper slope.

9) Sand blankets should be denied where lake beds suitable for wading and swimming already exists.

10) Sand blankets over rocky or gravelly bottom may influence spawning areas either positively or negatively.

11) Repeat sand blanket requests should be discouraged since this probably means the material is not staying in place.

12) Sand blankets cannot be used to create upland.

13) In general, sand blankets should not be allowed to create a shallower wading area in an area of natural steep bottom slope.

14) Sand blankets should not be placed in areas with fast current (over 1-2 ft/sec.) such as adjacent to inflowing streams.

15) Sand blankets should not be put in an area of active shore erosion.

d. Fish Cribs and Spawning Reefs

Fish cribs, spawning reefs, and similar devices should be authorized only in lakes and flowages under s. 30.12(3)(a). Only cribs and spawning reefs constructed of natural materials such as wood and stone should be permitted.

Cribs should be placed in at least 10 feet of water and have at least 6 feet of water over the top of them. Base the depths and clearance on established summer water level or "normal" low water.

Spawning reefs should be completely submerged at established summer water levels or during normal low water. Because spawning reefs are often located in shallow water, they should be marked with appropriate waterway markers that conform to design and approval criteria contained in NR 5.09.

Tree drops (cutting trees and allowing them to simply fall into the water) should be authorized pursuant to s. 30.12(3). They should be permitted only if deemed biologically necessary to protect or enhance a fish population, and if they are anchored or cabled to the shore.

e. Stream Habitat Improvement Devices

Most stream habitat improvement projects are constructed by the Department or by conservation organizations in cooperation with the Department. Projects constructed by the Department should be authorized using the procedures in Manual Code 3565.1. Projects that are not sponsored by the Department should be treated as minor structures and processed under s. 30.12(3)(a). Types of structures that may provide habitat improvement include half logs, boulder retards, bank cover (lunker structures), wing dams, "V" deflectors, digger logs and brush bundles.

It is very important that the fisheries manager review and concur with all stream habitat improvement devices. Improper design or placement of the devices will be unsuccessful and normally will cause environmental damage (erosion, sedimentation, etc.). If the intent is to narrow the stream, the structure should be evaluated for effect on flood flow capacity.
f. Nesting Platforms

Loon and tern nesting platforms anchored or fastened to the bed of a navigable waterway require approval pursuant to s. 30.12(2). Successful use by the intended species is quite variable around the state. For this reason, concurrence should be obtained from the local wildlife manager before approving requests for nesting platforms. Typical conditions for permits for nesting platforms include:

1) After placement, the nesting platform should be checked weekly. A record of use should be kept and made available on request.
2) Platforms should be removed from the waterway by August 31 of each year. They will not be used after that date. They must be removed and dried to prevent them from becoming waterlogged.
3) The platform should be placed in the water within a week of ice out (to improve chance of successful use by loons).
4) If not used by the intended species for two consecutive seasons, the platform should be removed and not replaced.

Other types of nesting platforms (osprey, cormorant, wood duck, etc.) are also placed in navigable waters. These should be permitted only with the concurrence of the local wildlife manager and in a manner that will not result in obstruction to navigation.

g. Waterfowl Habitat

1) Section 30.124 allows the Department to undertake waterfowl habitat activities that would normally be prohibited by statute. The Department must make specific findings that the project:

   a) will not adversely affect public or private rights or interests in fish and wildlife populations;
   b) will not adversely affect navigation;
   c) will not adversely affect flood-flow capacity of any waterway; and
   d) will not result in environmental pollution as defined in s. 144.01(3).

2) Activities which can be authorized by M.C. 3565.1 are:

   a) Cutting aquatic vegetation without removing the vegetation from the water for the purpose of improving waterfowl nesting, brood, and migration habitat.
   b) Developing nesting islands for the purpose of increasing waterfowl production.

3) Specific criteria for these projects include:

   a) All projects must be on public lands or waters. If the Department is not the owner of the land or not the riparian owner, an easement, lease, license, or other written permission from the owner or riparian is required.
   b) All projects must be designed, supervised, and controlled by the Department.
   c) For nesting islands being constructed in a wetland located in a shoreland/wetland zone and above the ordinary high-water mark of a navigable water body, an amendment to the local wetland zoning ordinance will be required. (No such amendment is necessary if the project is below the ordinary high-water mark although a local zoning permit may be
required).

d) Compliance with provisions of NR 347 is required if the islands are to be constructed with dredge material.

e) Erosion control measures must be employed during construction to reduce the potential for erosion. An erosion control plan should be prepared prior to construction.

4) General design criteria for waterfowl nesting islands include:

a) Size: Minimum - 0.1 acre (50' x 100' or 80' dia.)
   Preferred - 1 to 2 acres
b) Distance from shore: Minimum - 100'
   Recommended - 300'
c) Depth of water: Minimum of 2' for 30' around island
d) Island height above water: 2' above maximum authorized level
e) Side slopes: Minimum 4 H: IV
   Recommended: 5H: IV
f) Top Dressing: Recommended: 6" of suitable topsoil material
g) Cover: Cool season grasses or low brush

5) General design criteria for "cookie cutter" applications include:

a) Brood water: Minimum size - 2 acres of irregular shape
b) Pair ponds: Serpentine paths through vegetation mats
c) Pathways: Serpentine pathways connecting the brood water.

h. Aeration Systems

Those portions of aeration systems that are not attached to legal structures and are placed, anchored, or resting on the bed of navigable waterways are structures and must be authorized pursuant to s. 30.12(2).

Aeration systems should be evaluated for their adverse affects on any incidents to navigation such as snowmobiling, ice boating, ice fishing, and skating. All permits should have conditions requiring that ice holes or areas of open water or thin ice be marked with appropriate warning signs or other warning measures. Section 167.26 contains specific standards for marking ice holes and open water caused by aerators.
i. Fiberglass Screens for Aquatic Nuisance Control

While fiberglass screens used to control aquatic plant growth are not physically similar to sand blankets, they provide a similar function - to improve recreational use adjacent to an owner's riparian property. Accordingly, where screen placement meets the criteria of s. 30.12(3)(a)1. expedited permit processing is appropriate (no public notice required). Proposals that do not meet these criteria should be denied or, if appropriate, the notice and hearing procedures of s. 30.12(2) should be employed.

The following questions should be considered when deciding to grant or deny approval of a screen:

1) Will swimming, wading, fish habitat, boat access, etc., improve?
2) Is the project within the riparian owner's zone of influence?
3) Will wave action or currents dislodge the structure or cause it to be covered by sediment?
4) Will the screen materially impair navigation or be exposed by variable water levels?
5) Will the screen be placed over organic substrates that are likely to produce gas ballooning of the screen?
6) Is the anchoring system adequate (i.e. one brick every 3' along the sides and in center of screen)?
7) Will the screen be removed seasonally (after September 30 of each year)?
8) Will placement affect fish spawning or invertebrate production areas?
9) Will placement be in an area heavily used by anglers where snagging of fabric by lures is likely?
10) If for boat access, has the most direct route been selected?
11) Has the material been designed specifically for this purpose?

Permits for screens not removed and cleaned annually should be revoked and/or appropriate enforcement action should be initiated.

j. Shore Protection

Section 30.12(3)(a)3 allows riprap or similar material on the bed and bank to protect the bank and adjacent land from erosion. Administratively, the Department has interpreted "similar material" to include something which is functionally similar to riprap. Examples of "similar material" include wood and concrete retaining walls, steel sheet piling, C-LOC (plastic) sheet piling, and interlocking concrete blocks.

Certain materials are not suitable for shore protection because they are likely to fail in a relatively short time, can potentially create hazardous conditions, are not aesthetically compatible for shoreline use, or constitute a regulated solid waste. Examples of these types of materials include:

* foundry pots
* bricks
* plaster
* wood chunks
* asphalt
* bituminous products
* used automobiles
* scrap metal
* tires
* unprotected sand, clay, or other soil
* concrete demolition material having protruding reinforcing rods
* or any material that could produce toxic or hazardous leachate

Permit applications for shore protection measures designed primarily for landscaping or "aesthetic" purposes should be denied. An example might be a retaining wall along the shore where the real purpose is to fill and level a gradually sloping lot to make it "more useable."

1) Riprap

The Department should encourage the use of rock riprap for shore protection in lieu of other materials or vertical walls. Riprap is generally easier and/or less costly to maintain, more aesthetically compatible, and less destructive to fish and wildlife habitat than other methods of shore protection. Rock riprap often provides or enhances habitat for fish and aquatic macroinvertebrates.

On inland lakes, fieldstone or quarried stone up to 250-pound size is suitable as riprap. On the Great Lakes, much larger stone should be used (500-2000 pounds or more). Use of a geotextile or graded gravel filter layers under the riprap is encouraged to reduce maintenance and provide stability. The riprap layering, from coarse (rock) to fine (gravel), absorbs wave energy and prevents soil particles that would ordinarily be washed away from escaping.

There is no specific limit to the allowable amount of intrusion into the water to stabilize a shoreline. However, riprap should extend no further into the water than necessary to provide a stable structure.

At one time the Department required removal of bank material to compensate for the installation of riprap. Due to difficulties enforcing this policy, complaints and questionable legality, the above policy was adopted.

Applications for riprap projects can be submitted using either the standard or short form application. Use of the short form application/approval (Form 3500-91), which can be issued immediately at many DNR offices, requires that the project comply with all of the conditions printed on the form.

Riprap projects can also be reviewed and approved using the General Permit process described in NR 322. To qualify for a general permit, the proposed project must comply with each condition printed on Form 3500-86 and contained in NR 322.

2) Retaining Walls

A retaining wall is any structure placed below the ordinary high-water mark which creates a distinct vertical separation between open water and upland.

Retaining walls designed for use as shore protection can be authorized using s. 30.12(3)(a)3. Retaining walls used primarily for docking or boat moorings cannot be considered "shore protection" and must be reviewed and authorized under s. 30.12(2).

Retaining walls have traditionally been authorized, although reluctantly in some cases. Recently, a detailed analysis has been completed that indicates significant long-term cumulative adverse impacts are associated with these structures. Problems noted include:
a) They often fail in a relatively short time compared to their expected structural life (particularly those installed by individuals for protection of their shoreline). Failure can result from one or more of the following factors:

i. Exposure to the drastic change in seasonal temperatures.
ii. Physical forces associated with ground freezing and thawing.
iii. Hydrostatic pressure.
iv. Improper design and/or installation of generally inflexible materials.
v. Improper choice of construction material.
vi. Undermining of structural footings because of currents, wave action, or seepage.
    vii. Ice damage.
    viii. Failure to use tie backs or deadmen.

Frequent failure can result in deposition of fill and debris into navigable waters, increased costs to the owner for removal of a failed structure and costs to replace the structure.

b) Other possible adverse impacts of retaining walls that should be considered to determine if a project will or will not be detrimental to public rights and interests include:

i. Cumulative adverse effect upon the aesthetics of natural shorelines. The distinct visual separation caused by retaining walls is generally considered a degradation of the natural shoreline.
ii. Cumulative effects upon flora and fauna within the shallow water/shore interface area which may cause a significant disruption to the food chain and aquatic ecosystem. The near shore area is often necessary habitat for fish spawning and juvenile fish habitat. This habitat is often destroyed when a retaining wall is constructed.
iii. Retaining walls are effective barriers to the survival of fauna that depend upon the cohabitation of an aquatic/terrestrial environment (amphibians for example).
iv. Disruption of water movement to and from contiguous wetland complexes. This could result in alteration of species composition of the wetlands and could render it unusable for certain aquatic fauna that depend on the wetland during any given life stage.
    v. Exacerbation of erosion problems on adjacent reaches of shorelines.

c) Based on known problems related to retaining walls concerning long-term adverse effects, the following criteria should be considered in the permitting process prior to issuance or denial of a permit:

i. For retaining walls issued under 30.12(3), the purpose of the project must be to protect the bank and adjacent area from erosion.
ii. The Department must find, after inspection and analysis of the anticipated project impacts, that the retaining wall will not be detrimental to public rights and interests or interfere with the rights of other riparians.
    iii. The Department must find that the applicant has submitted design specifications and construction details that clearly demonstrate the wall would be structurally sound.

d) These are some situations where, while adverse impacts are expected to occur, extenuating circumstances may not warrant an extensive evaluation or permit denial.
Situations that commonly fall into this category include:

i. Retaining walls constructed in connected enlargements where walls presently exist. These are artificial bodies of water where design and adjacent construction have generally destroyed natural environmental values associated with the area.

ii. Locations where ice and wave damage potential is small

iii. Locations where aesthetic values are low

iv. Locations where vertical docking facilities are needed (municipal or industrial harbor areas, marinas) [permit under s. 30.12(2)]

v. Locations where environmental values are limited

vi. Steep severely eroded shorelines where additional deposition of material is likely to occur because of slope failure.

k. **Buildings (Except Boathouses) on Lakebeds**

With increasing frequency, we are asked to approve structural repairs to buildings other than boathouses located below the ordinary high-water mark of a navigable waterway.

If a permit had been issued for the building, the structure can usually be maintained as long as any maintenance complies with terms or conditions of the original permit. The use of the building must not change substantially from its original authorized use. If other public interest factors have changed, the Department may "reopen" the permit.

For any building without a permit after the enactment of Chapter 335, Laws of 1949 (June 28, 1949), requests for maintenance permits should be denied and action should be initiated to seek ultimate removal of the building.

Structures placed between 1933 and 1949 are not legal. Such structures were prohibited and there were no provisions for permits until the 1949 law. Prior to 1933, there was no specific prohibition to placement of structures and buildings on lake or streambed as long as navigation was not obstructed. See the history section of this chapter for a detailed discussion of structures and buildings placed in waterways.

While our goal is ultimate removal of unauthorized buildings, we are often faced with an issue of equity. The equity issue can be dealt with by employing nonconforming use concepts such as those in the "boathouse law" contained in s. 30.121.(3). This law allows for maintenance and repairs of the structures "if the cost of repair or maintenance does not exceed 50% of the equalized assessed value of the boathouse."

If, because of equity or other extenuating circumstances, it is decided not to pursue immediate removal of a structure, the following procedure should be used and attested to by a mutually-signed stipulation or agreement:

1) Determine the current equalized value of the structure. If an independent assessment of the building is not available, obtain an appraisal of the building that describes "current fair market value." Each time repairs are needed a new value should be submitted so accurate proportion of repairs made can be determined.

2) Require the applicant to maintain records of all maintenance and repair records - to be made available to the Department on an annual or demand basis.

3) Once repair and maintenance costs equal 50% of the value(s) determined in step 1, the structure should be removed from the bed of the waterway.
4) The stipulation or agreement shall be recorded with the Register of Deeds in the county in which the structure is located.

5) Any violation of an agreement or stipulation should be treated as a violation of the law and enforced in accordance with the provisions of Chapters 30 and 227.

1. Waterfowl Blinds

Waterfowl blinds on state-owned property, including the beds of natural lakes and state-owned flowages, are treated differently from those on privately owned beds of waterways.

"Blind" is defined as a permanent structure used in hunting waterfowl which is not removed at the end of hunting hours each day.

"Waterfowl" means wild geese, brant, wild ducks, rails, coots, gallinules, jacksnipe, woodcock, plovers, sandpipers and wild swan.

1) State-owned land

Blinds on state owned lands are regulated under s. 29.27. The requirements imposed under this law are:

a) The blind must bear the name of the owner affixed permanently to the blind in lettering one-inch square or larger.

b) It may be erected not more than 7 days prior to the opening of the waterfowl hunting season.

c) It must be removed within seven days after the close of the waterfowl season.

Blinds that don't meet the requirements of s. 29.27 that are constructed on state property by property managers are allowable under Manual Code 3565.1 procedures. Since they are built by the state, they need not be removed if adequate justification to keep them in place is proven. Situations in which permanent blinds could be allowed are for the handicapped and for viewing wildlife that may be present for more than the waterfowl hunting season.

2) Privately owned land

Blinds would technically be considered structures within the meaning of s. 30.12. However, due to tradition and the practical problem of seeking enforcement for thousands of duck blinds on the beds of navigable waters, the Department's policy has been to investigate and seek enforcement, if appropriate, in response to a written complaint from the public. We do not actively investigate duck blinds, unless the blind is a serious hazard to navigation or it is causing environmental damage. Aesthetics should be considered in any questionable duck blind since the skeletons of abandoned or unused blinds seem to be the most common concern with blinds. (A.C. Damon Memo 3/15/77). Any enforcement action would come under either ss. 30.12 or 30.15.

We have consistently taken the position that duck blinds are not to be considered for issuance of permits using the same logic as we use for boathouses: the structures are an unnecessary private use of a waterway and they are not absolutely necessary for gaining access to navigable water nor are they necessary for a riparian to pursue his or her private rights in the navigable water. This policy has resulted in the practice of not prohibiting reasonably sized blinds but allowing blinds that are the minimum necessary to pursue the activity. Examples of things that
should not be allowed are two-story structures and structures with storage facilities. Blinds placed on privately owned beds of waterways are of course controlled by the owner of the property and may be treated as any other trespass action.

m. **Water Ski Jumps**

Seasonally installed ski jumps have been interpreted to be structures that are regulated under s. 30.12 by the state Court of Appeals in 1982. Most ski jumpers contend that a jump must be properly positioned and firmly anchored in order to be safe. The time and effort required to do this usually does not allow the jumps to be installed only when they are to be used.

In addition to the flood flow capacity and public interest requirements found in s. 30.12, there are some specific factors to consider in the review of water ski jumps:

1) Is the structure within the applicant's "riparian zone"?
2) Will the use (not the structure itself) create safety problems or user conflicts?
3) Is the color, shape and lighting of the structure adequate so that it is not a hazard to navigation?

These are some of the conditions that are normally included in a permit for a water ski jump:

1) The structure must be lighted from sunset to sunrise by a white light visible all around the horizon. The light must be of such character as to be visible at a distance of at least 2 miles on a dark night with clear atmosphere.
2) The structure and its associated use area must be marked with uniform marking buoys using rectangular information symbols. The permit holder is responsible for maintenance of the structure and the marking buoys. The buoys must be authorized by a municipal ordinance adopted pursuant to s. 30.77.
3) This permit is subject to the provisions of ss. 30.66 and 30.69 which forbid water skiing within 100 feet of an anchored occupied boat, marked swimming area, public boat landing, dock, raft, pier or buoyed restricted area.
4) The State of Wisconsin, by issuing this permit, assumes no liability for any damages resulting from placement or use of the structure.

We have taken the position that the use of any permitted ski jump may be restricted by the owner as allowed in s. 30.12.

n. **Fords**

1) All material excavated for placement of the material and sloping the streambanks must be leveled on adjoining upland.
2) You are required to remove an amount of material equal to the material to be placed on the stream bed.
3) The finished elevation of the stream bed must match the natural stream bed at both the upstream and the downstream end of the crossing.

o. **Boat Ramps**

There are three basic types of boat ramps commonly used in Wisconsin--poured in place concrete, pre-cast concrete slabs and gravel. Cost, anticipated use and the amount wave or current and ice action determine which materials are used. A slope of 13-15% is typical for ramps on inland lakes.
1) Poured in place concrete
   a) Used where there is high wave and ice energy or heavy use.
   b) Usually requires dewatering the site.

2) Pre-cast concrete slabs
   a) Susceptible to ice action.
   b) Easy to install without heavy equipment.
   c) Requires a 6” layer of 4” stone as bedding.

3) Gravel
   a) Easily damaged by ice, wave and currents.
   b) Disturbs least amount of area.

Factors to consider:

* Will the ramp and associated parking area contribute to overuse of the waterbody?
* Will a navigation hazard be created by adding boats to the area of the ramp?
* Will neighbors be affected by increased use of the area?
* Is the boat ramp consistent with adjoining uses such as swimming areas, natural areas, etc.?

F. FINAL DISPOSITION

All structures are approved by permit one way or another. See manual code 3506.1 for procedure. We have long form permits, short form permits and general permits, each with a somewhat different process and final authorization.

Where a public notice is required, it is the Department's policy to grant hearings to applicants if it objects to their projects. Section 30.02(3) directs the Department to schedule a hearing when we receive a substantive written objection and hearing request as a result of the public notice.

See chapter 10 of the handbook for appropriate appeal language to be included in any permit.

G. MONITORING

Permits should require the applicant to notify the Department five days before starting work and within five days of completion of the work. There should be a follow-up inspection to determine whether the work was done in accordance with permit conditions. Enforcement action should be considered if the work deviates significantly from the plans. Voluntary compliance may be sought in lieu of enforcement actions where permit violations are minor and particularly where statutory standards have not been compromised.

H. EMERGENCY PROCEDURES

Although perhaps not an emergency as such, the sudden loss of land or avulsion sometime occurs. The Department's position is that land that is lost due to a sudden occurrence, i.e., flood or storm damage, may be
replaced without formal authority if the work takes place within one year of the loss.

Authorized structures that sustain damage may be repaired without further authority unless the repair will involve enlarging the structure. Repairs to unauthorized structures should only be allowed if the owner secures a permit to maintain the structure.

I. ENFORCEMENT

A person violating s. 30.12 or any condition of a permit issued under that section is subject to a fine of not more than $1000 and/or imprisonment of up to six months if enforcement is undertaken pursuant to s. 30.12(5). Abatement pursuant to s. 23.79(3) should be requested when appropriate.

Because violation of s. 30.12 is a criminal offense, the legal burden of proof is quite high. An alternative civil proceeding is available and often more desirable to pursue. Forfeitures of not less than $10 nor more than $500 per day and/or abatement can be secured if enforcement is undertaken in accordance with ss. 30.15(1)(a) or (d) and 30.294. Since s. 30.15(3) declares each day a violation of (1) occurs a separate offense, the monetary penalty and subsequent deterrent value could be considerably higher under this section rather than s. 30.12.

Enforcement actions should be initiated with the appropriate circuit court. There will be occasional situations where the courts will not require what we feel is necessary to protect the environment or comply with the statutes. If this should occur, we only have two choices - appeal the decision or accept the court's action as sufficient disposition of the case. Additional enforcement proceedings under s. 30.03 are not an option once local enforcement actions have been completed.

In cases where we have reason to believe that local enforcement will not produce a satisfactory result, we should pursue full compliance through proceedings under s. 30.03.

J. EDUCATIONAL MATERIALS

DATE: May 12, 1994

TO: District Directors

Chapter 70, Water Regulation Handbook

FROM: John Fryatt - AD/5
Susan Sylvester - AD/5
Jim Addis - AD

SUBJECT: Regulation of automatic mechanical weed control devices

Recently, a mechanical weed control product was introduced into the market place under the trade name of "WeedRoller." Last year there were several interested vendors for this product seeking pre-authorization in the state of Wisconsin. During our review of this product it has become clear that several programs and Divisions need to be involved with the analysis of future proposals. The Lake Management Program is responsible for issuing permits for aquatic plant management and designating sensitive areas for aquatic plant protection, while the Water Regulation Program reviews applications to place structures on the beds of streams and lakes. Also, Fisheries Management routinely participates in the analysis of Chapter 30 projects and permits issued under the aquatic plant management program. Although this memo is primarily aimed at analysis of mechanical weed control, much of the guidance is also applicable to chemical weed control analyses. Accordingly, the three involved Division Administrators have reviewed and are signing this memo.

What is a WeedRoller?
The WeedRoller is a structure which effectively eliminates plant growth on the beds of lakes and streams at the site of installation. The product consists of up to three ten foot long, 6 inch diameter hollow aluminum tubes connected together to form a maximum length of 30 feet. The aluminum tubes then turn around a center pivot (generally the end of a pier) in a rolling motion at a rate of 4 revolutions per minute. The rotation of the tubes and the action of the cleats attached to the rollers disturb the bed in an effort to inhibit the growth of any rooted aquatics. The desired end result of this type of installation is the removal of all vegetation on the bed in a circular pattern up to 270 degrees and covering a maximum of 2100 square feet in area. The company has successfully tested systems which cover more area (as long as 60 foot radius) but currently does not recommend or warrant systems longer than 30 feet. Clays, silts and fines are suspended and eventually washed clear of the area.

How will we regulate WeedRollers?
Since the structure rests directly on the bed, placement of the device requires a permit under s. 30.12 Wis. Stats. While the WeedRoller, used to control aquatic plant growth, is not physically similar to sand blankets, it provides a similar function - to improve recreational use adjacent to an owner's riparian property. Accordingly, the criteria and procedures of s. 30.12(3)(a)l and (b) Wis. Stats., are appropriate (no public notice required). Proposals that do not meet these criteria should be denied.

Upon receiving an application Water Regulation Staff will forward the application to Water Resources staff who will review the project from an aquatic plant control perspective. Water Resources staff will...
coordinate with Fisheries and Wildlife Management staff and make a recommendation to grant or deny the permit. This coordination and evaluation should be conducted similar to that in the existing chemical weed control program. Recommendations to deny the permit must have written justification and a commitment to support the recommendation at a public hearing if a hearing is necessary. Water Regulation staff will then address programmatic concerns and coordinate with other programs as necessary.

What considerations should be addressed in the review process?
The decision to grant or deny a chapter 30 permit is based on the impact the project will have on the public interest, which includes assessments of impacts to navigation, recreation, fisheries, wildlife, aesthetics and water quality.

Navigation and incidents of navigation:
This product has the potential to interfere with navigation. Use of the product should be restricted to sites with appropriate depths. If the site is in an area of potential navigation, depths should be at least 3.5 feet measured at the expected minimum water levels, to allow boats to safely pass over the roller. The device should not be allowed in areas where unwary swimmers might be present. The company's literature states, "Never allow people in the water while WeedRoller is working or plugged in." In some cases it may be appropriate to require conspicuous warning signs posting hours of operations and advising of potential hazards during operation.

Fishery and wildlife:
Macrophyte communities play two important roles in structuring littoral zone fish communities: 1) They provide increased production of invertebrates as food for littoral zone fish, and 2); They provide littoral zone fishes with diverse habitats that serve as refuges from predation and result in uniquely structured fish assemblages.

**Impacts on Fish Community Structure**
Fish species richness in aquatic ecosystems is related to habitat heterogeneity. Vegetation, one of the most important types of habitat, is significantly related to the overall species richness among lakes; lakes with more diverse aquatic vegetation have greater species richness. The cumulative impacts of any device that eliminates submersed macrophytes will ultimately create more homogenous habitat and has the potential to reduce species richness. Variation in plant growth forms (thick leafless stems --- thin stems with broad abundant leaves) within a lake indirectly influence fish community structure in littoral habitats. Also, lake size and form influence macrophyte distribution: larger windswept lakes have fewer, yet valuable macrophyte beds. Some fish species associated with specific macrophyte beds are simply very valuable (due to their scarcity). Site-specific or cumulative potential impacts of macrophyte removal on fish community structure may be grounds to deny a permit.

**Impacts on Fish Production**
The littoral zone is the most productive portion of a lake. Macrophytes augment production of invertebrates in aquatic ecosystems. Macroinvertebrate abundances are limited by the availability of suitable substrate for colonization. Macrophytes provide extensive increases in substrate for invertebrates relative to an unvegetated lake bottom. Macroinvertebrates living on the surface of macrophytes (epiphytic) are an important food resource for many fish species associated with the littoral zone. The habitat macrophytes create ultimately contributes to fish growth and production. Often predators like largemouth bass confine fry and juvenile fish (small bluegills <60 mm are vulnerable to predation) to vegetated habitats. If vegetated habitats are significantly reduced, small fish are exposed to increased predation, or survivors can occupy the remaining macrophyte beds at higher densities, depleting their food resources and resulting in slower growth rates. Bluegill growth appears to be greatest at intermediate densities of macrophytes. Extensive and dense macrophyte communities can limit predation on small bluegills, which often results in excessive survival, reduced growth and smaller, less desirable size structure. Growth rates and size structure of common littoral zone fish species can be used to identify...
whether macrophyte communities, in a general sense, are limiting or abundant. For example, extremely dense, slow growing (not small size-structure) bluegill populations typify lakes with dense macrophyte cover over much of their surface area. Conversely, less abundant, fast-growing bluegill populations can result from limited macrophyte cover.

In lakes that are dominated (extensive monotypic beds covering much of the lake's surface area) by an exotic (i.e. Eurasian water milfoil), permits may be appropriate. However, permit review should carefully examine the near shore macrophyte beds for remnant native plants found on the shallow near shore shelf, as Eurasian water milfoil invasion generally follows a pattern of rapid expansion, dominance, and then a several year period of decline. At times, non-removal of milfoil may be an appropriate management alternative, and protecting remnant natives may be beneficial.

**Impacts on Fish Spawning and Nursery Habitat**

By its mechanical nature, the Weed Roller eliminates any fish spawning in the immediate area, and may impact adjoining habitats due to sediment suspension, transport, and settling. Limiting operation of the device to miss spawning periods would eliminate use during most of the spring and summer because many littoral zone fishes spawn well into the summer. Also, enforcement of such seasonal provisions as a permit condition may not be practical. Conservatively, it should be assumed that all fish spawning in the impacted area will be eliminated.

Permit reviews should also evaluate the importance of the macrophyte beds as nursery habitat for littoral zone fishes; as the action of the Weed Roller will remove all nursery habitat at the site and displace any use of small fish within the area.

**Impacts on Macrophyte Community**

Some plant communities are simply very valuable either due to their scarcity in the local ecosystem or due to their overall scarcity throughout the state. Presence of these types of communities may be grounds to deny a permit. Every analysis needs to consider the cumulative impacts of similar removals throughout the waterbody. Generally speaking, healthy lakes have diverse natural plant communities which help support a diverse fishery. Removal of patches of vegetation will have the effect of diminishing the overall diversity of healthy communities and expose the community to colonization of aggressive exotics such as Eurasian water milfoil. Spot plant control may not appear to be negative on a site by site basis but generally, when considered on a cumulative basis, will have negative affects on healthy plant communities. Permit review should also examine impacts on emergent macrophytes as this device can operate in shallow water or on land.

Permit review needs to consider that impacts of the Weed Roller may be quite different from those of traditional weed harvesting and chemical herbicides. After Weed Rollers are removed, the sites are not expected to recover as quickly or to a similar species composition. Important organics, detritus, and fine sediment will likely have been suspended and transported from the site and rhizomes/roots will likely be destroyed.

Permit review should consider that the device will not operate in perpetuity. During some years, the owners may not visit their cottage. Other years the owner may loan the device out to other interested neighbors. Some years there will be mechanical breakdown and eventually the owner will move on. When that happens the open site is prime for colonization, which may be by an unwanted exotic species.

**Macronvertebrate Impact:**

Macronvertebrates will be affected. The degree of impact will be a function of the type of bed material involved and the associated water quality. Also, vegetative communities themselves may be a significant habitat area for macroinvertebrates. The action of the Weed Roller will severely reduce epiphytic and benthic (bottom dwelling) invertebrate production at the site. Epiphytic invertebrates will be nearly absent because of the loss of macrophyte substrate. After operation, new characteristics of the bottom substrate (loss of fine sediment, organic
detritus) will be unfavorable for most species of benthic invertebrates. Cumulative impacts of macrophyte removal on littoral zone invertebrate and fish production may be grounds to deny a permit.

**Aesthetics:**
Obviously, the Weed Roller will eradicate any emergent vegetation in the area. Elimination of this natural scenic beauty needs to be considered in the permit analysis and may be a valid reason for denial of a permit.

**Water Quality:**
Since this device is likely to temporarily resuspend bed material, it is important that it be restricted to appropriate bed material. The rollers and cleats tend to repeatedly suspend fines until they are washed clear of the area, eventually resulting in a consolidated firm bottom. Until the device reaches a stable setting, it is likely that water quality near the device will be negatively affected. The reviewer needs to consider the particle size of the bed material and the impact of continual resuspension of fines on the water column. Some lakes have been treated with chemicals that may be tied up in the existing sediment. If staff believe that the bed material at the site may be contaminated, sampling may be in order.

**Compliance with Section 30.125 Wis. Stats.:**
Section 30.125 requires weeds to be removed after they're cut. The intent of this product is to remove plant material by agitating the bed and then letting the weeds float to the surface and shore. Because this product is designed to be operated remotely, it is likely that much of the vegetation could end up on the shore (either the applicant's or someone else's) and could lie there uncollected. Therefore, any permit granted should require plant removal before initial and subsequent seasonal installations.

**Transportation of exotics:**
Some exotic species may actually be transported by moving these types of mechanical devices from lake to lake. Permits authorizing the installation of these devices should contain a condition that restricts the device to the lake and site it was authorized for, unless specifically authorized by the Department through a permit amendment.

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cc: All Water Regulation & Zoning Staff
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GUIDANCE PURPOSE AND DISCLAIMER

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PURPOSE

Regulating the placement and length of piers

A riparian owner has the right to place a pier, wharf or other similar structure in aid of navigation. This right is subordinate to the public right of navigation, and the rights of the state as trustee of the navigable water of Wisconsin. The pier statutes and administrative rule are designed to clarify the right of riparians to reasonable access and use of public water, while guaranteeing that public rights will not be abridged.

MECHANISM

A riparian owner may place a pier which meets applicable statutory and administrative rule standards without a permit. If the Department or any other citizen feels that any pier obstructs navigation, they may commence a civil action under s. 30.15, Wis. Stats., to seek abatement. Alternatively, upon complaint to the Department by any citizen that any pier or wharf violates ss. 30.12 or 30.13, the Department must hold a hearing under Section 30.14 to determine the validity of the complaint.

HISTORY

Municipalities have been authorized by law to regulate docks, wharves and piers long before the state began regulating these structures. As early as the 1800s, cities were authorized by charter to regulate the construction of wharves and piers. It was not until 1933 that a state program for authorizing structures in navigable waters was enacted. A complete history of statutes authorizing state and local control over piers, wharves and docks through 1959 may be found in handbook Chapter 70, and will not be repeated here.
Chapter 441, Laws of 1959, created sections 30.13 and 30.14, Wis. Stats. These statutes incorporated language previously found in section 30.02, and added some new language. Section 30.13 stated legislatively for the first time the common law right of riparians to build a pier without a permit, provided the pier did not extend beyond an established pierhead line or interfere with public rights. This language was designed to clarify the right of riparians to build reasonable piers, while retaining state enforcement rights against unreasonably long piers, or those which interfered with navigation or other public rights.

Section 30.13 also changed the phrase "dock line" to the more modern "pierhead line," although the meaning is the same. The right to enact a pierhead ordinance was expanded to include all municipalities, not only cities. The procedure for establishing a pierhead line was declared to be the same as that for a s. 30.11 bulkhead line. The phrase "public rights in navigable waters" found at the end of s. 30.13(3) was a redraft of the previously standard "public rights" found in s. 30.02(1)(9), and was thought to more clearly express the legislative intent to protect public rights when approving a pierhead line.

Prior to the enactment of Chapter 441, it was illegal for a riparian "to extend his wharf or pier into navigable water beyond the dock line as established, if such extension materially interferes with, or obstructs navigation" (Chapter 335, Laws of 1949). In practice, the Public Service Commission was forced to determine, on a case-by-case basis, whether a particular pier which extended beyond an established dock line actually obstructed navigation. Chapter 441 changed this language to indicate that a pier could only be extended beyond an established pierhead line if a Section 30.12, Wis. Stats., permit was received.

Section 30.14 was created by Chapter 441, and is a restatement and consolidation of language previously found in ss. 30.02(1)b, c and g.

There have been no substantive changes in either Section 30.13 or 30.14 since 1959.

In 1981, the Wisconsin Supreme Court decided Nosek v. Stryker, 103 Wis. 2d 633. This case involved a dispute between two riparians over the respective location of their piers. The court reviewed various proposed rules for apportioning the riparian zone of interest, and concluded that the trial court had correctly applied the "right angle rule" (very similar to the coterminous rights theory described in two drawings in the appendix). This case affirmed that under common law rule a pier could not extend further than the line of navigation for the lake, and that each riparian was entitled to exclusive use of his riparian space for purpose of access to navigable water, provided he did not interfere with public rights. This case is the leading case in the area of riparian disputes over piers and wharves.

**STANDARDS**

Statutory standards administered by the Department in s. 30.13, Stats., include the following:

1. Wharves and piers may be constructed in aid of navigation without a permit provided they meet all other applicable standards found in Section 30.13, Stats.

2. Wharves and piers shall not interfere with public rights in navigable waters or with the rights of other riparian proprietors.

3. Any wharf or pier which extends beyond a lawfully established pierhead line or which otherwise fails to comply with this section constitutes an unlawful obstruction to navigation unless a permit has been obtained pursuant to Section 30.12, Wis. Stats. Pierhead lines may be established by a municipality in the interest of the preservation and protection of its harbor or the public interest using a procedure similar to that used for a bulkhead line (see Chapter 60 of the handbook).
4. If the municipality has created a board of harbor commissioners, the municipality must obtain approval of the board for any pierhead line.

5. Wharves and piers shall allow for the free movement of water underneath.

6. Wharves and piers shall not be built so as to cause the formation of land upon the bed of the water.

Section 30.14, Wis. Stats., provides that the Department must hold a hearing upon complaint of any person that any wharf, pier or structure exists in violation of either s. 30.12 or 30.13, Wis. Stats. This hearing is held before a Department of Administration examiner, who determines if the complaint is valid. This hearing should normally be held under both sections 30.14 and 30.15, since no enforcement is set forth in s. 30.14. If the examiner finds that the pier or structure is in violation, he can then order abatement pursuant to Section 30.15, Wis. Stats. Enforcement of an abatement order issued under s. 30.15 may be sought under either section 30.03, Wis. Stats., (see chapter 50 of the handbook for further details) or in a local court action where forfeitures may be assessed.

Municipal Authority to Remove Piers

A municipality may remove a pier or wharf which constitutes an unlawful obstruction of navigation in accordance with ss. 30.13(4)(c), 30.13(5), 30.16(2), 66.0495, 823.215 and 893.765, Wis. Stats. These statutes declare that piers and wharves which are dangerous or beyond reasonable repair are public nuisances, and subject to removal by municipal action.

Administrative Rules

1. NR l.95, Wis. Adm. Code: Wetland Protection and Preservation. Establishes general standards to be applied by the Department in decisions affecting wetlands. The Department shall consider proposals which require its approval with the presumption that wetlands are not to be adversely impacted or destroyed, and that the least overall adverse environmental impact shall result.

2. NR 326, Wis. Adm. Code: Regulation of Piers in Navigable Waters. NR 326.04 includes the following standards:

   (1) Piers shall not extend into water deeper than 3’ unless necessary to allow navigation for boats in use or appropriate for use on the waterway. The depth of the water necessary for nonfixed keel sailboat draft shall be measured with the centerboard or dagger boards raised. The determination of necessary water depth shall be based on the normal summertime low levels on the waterway, or summer minimum levels where established by department order.

   (2) Notwithstanding par. (1), piers may extend out to any legally established pierhead line.

   (3) Solid piers.

      (a) Solid piers may be permitted under s. 30.12, Wis. Stats., only on the following waters:

         1. Outlying waters;

         2. Harbors connected to outlying waters;

         3. The Fox River from the DePere dam to Lake Winnebago;
4. Lake Winnebago; and

5. The Mississippi River.

(b) Solid piers shall be provided with a sufficient opening to provide for the passage of littoral drift. The opening size shall be adequate to prevent the deposition of littoral drift, considering wave energy, littoral drift supply and near-shore water depths.

(4) A pier shall not totally enclose any portion of a navigable waterway.

(5) Piers shall not unreasonably obstruct navigation or otherwise interfere with public rights in navigable waters.

(6) Piers shall not interfere with the rights of other riparian proprietors.

(7) Piers shall not interrupt the free movement of water nor cause the formation of land by deposition of littoral drift upon the bed of the water.

(8) Piers associated with marinas and other similar mooring facilities shall not extend into the water from the shoreline beyond the line of navigation unless a permit is obtained under s. 30.12(2), Wis. Stats. All such marinas (those with facilities requiring a s. 30.12 permit) must be open to the public, and use of the facility by the public may be conditioned only on the payment of a reasonable mooring or anchoring fee.

Note: For example, the use of such an extended pier shall not be conditioned upon membership in a private club or organization, purchase of a parcel of property, or purchase of a boat.

(9) Piers shall not be constructed or maintained with a screen or in any other manner which would trap or accumulate aquatic plants.

3. NR 150, Wis. Adm. Code: The placement of a pier or wharf not exempt from permit requirements is a Type 3 action, not generally requiring the preparation of an environmental assessment screening worksheet (EIASW). The establishment of a pierhead line under s. 30.13, Wis. Stats., is a Type 3 action.

ADMINISTRATIVE INTERPRETATIONS

1. Solid structures cannot be built out to a pierhead line without a s. 30.12, Wis. Stats. permit (BLS opinion 4-21-70).

2. The right to place a pier is a riparian right vested in the owner of the fee title of the property. An access easement simply allows use of land without conveying the riparian right to build a pier, therefore, the holder of an access easement cannot construct a pier (BLS opinion 5-31-72).

3. An owner of an interest in riparian land (such as a condominium owner) is a riparian proprietor under Wisconsin law. In all cases, an individual check must be made of the declaration or instrument establishing unit ownership to determine if any land was conveyed along with the condominium unit itself. A person possessing less than full fee title may construct a pier if the remaining interests which would together constitute fee title are also present (e.g., a lessee of riparian land could construct a pier if the lessor agreed to such in the lease).
A riparian owner has the right to rent mooring space, provided the pier meets the requirements under s. 30.13, or is permitted under s. 30.12, Wis. Stats. (Note that there are additional requirements imposed under NR 326, Wis. Adm. Code, which became effective after this opinion was issued.)

A pier which extends beyond the point of navigability for the largest craft which will be moored at the pier may be an obstruction to navigation. (This opinion has since been codified by NR 326.) The mere fact that a pier is surrounded by other long piers does not entitle the owner to extend further into the lake than needed for his boats (BLS opinion 6-8-73).

4. A municipality must receive approval under NR 5.09(3)(b) for the ordinance establishing a designated mooring area created pursuant to s. 30.74, Wis. Stats. A s. 30.12 permit is not required by municipalities placing mooring buoys. The municipality must have a riparian interest in the land adjacent to the mooring area (BLS opinion 4-12-79).

5. Riparian rights may be sold or rented by a riparian proprietor. Any riparian owner may rent mooring buoys within the area covered by his riparian rights.

The riparian rights of backlot owners depends upon the interest they have in riparian land. Only a riparian owner has the right to place a mooring buoy or pier in front of their property. (Letter from James Kurtz to Robert Bramer on mooring buoy question, 6-5-80.)

6. A proposed program guidance on swimming, waterskiing and mooring rafts is attached. This guidance was written by George Meyer on September 8, 1981 and is the latest memo on these structures.

7. A program guidance memorandum on Chapter NR 326, Wis. Adm. Code, is attached. This guidance was proposed by George Meyer on 10-14-81 and is the latest memo on this administrative rule.

**PROCESS**

A. Application

If a pier or wharf meets the criteria set forth in s. 30.13, Wis. Stats., no permit is required and no application is filed. If the applicant proposes to build a pier beyond a pierhead line, beyond the line of navigation, or otherwise not consistent with s. 30.13 or NR 326, a permit under s. 30.12 must be applied for. The application would then be considered as a structure application, and all of the considerations outlined in handbook Chapter 70 should be examined.

B. Inquiries or Complaints about an Existing Wharf or Pier

Complaints are sometimes received from a riparian claiming that a pier or wharf which is being or has been constructed without a permit interferes with his rights. Such a complaint must be investigated by the Department. If the investigation shows that public rights or interest are involved, appropriate facts should be gathered and either local prosecution or a s. 30.03, Wis. Stats., enforcement action should be undertaken. If the controversy is a local one involving primarily the complainant and the person complained against, we should advise the complainant that he is free to file a complaint under s. 30.15, Wis. Stats. in local court. If the complainant chooses to request a hearing before an examiner pursuant to Section 30.14, Stats., our policy is to require the submission of sufficient information for the examiner to make a decision before scheduling a hearing. This policy has been adopted to reduce the incidence of
frivolous hearings.

The question of whether a pier or wharf interferes with public rights in navigable waters depends upon the facts and circumstances of each case. Important factors to be considered in making such determinations are:

(a) The length, size, and position of the pier or wharf in relation to other piers or wharves in the vicinity;

(b) the type of pier or wharf constructed;

(c) the watercraft in use or suitable for use on the waterway.

(d) depth contours of the water body adjacent to the pier or wharf; and

(e) the location of adjacent property lines;

(f) navigational use practices.

A pier or wharf which impedes the ability of adjoining riparians and others to navigate and have reasonable access to and from the shore in the vicinity of the pier violates Section 30.13, Wis. Stats. If the pier interferes with public rights, we should join in the action against the owner of the pier or start our own action.

C. Pierhead Lines

Section 30.13(4), Wis. Stats., provides that a pierhead line may be established by any municipality using the procedure specified in s. 30.11, Wis. Stats. The pierhead line must be enacted as a municipal ordinance and approved by the Department, then filed in accordance with Section 30.11, prior to the pierhead line becoming effective. Any pier or wharf which extends into navigable water beyond a lawfully established pierhead line is an unlawful obstruction of navigable water unless a permit has been obtained as provided by s. 30.12(2)(a), Wis. Stats. If the municipality has a board of harbor commissioners, the municipality must obtain the approval of the board as well as approval of the department prior to establishing a pierhead line.

FIELD INVESTIGATION AND ENFORCEMENT

1. Investigations

Upon complaint concerning an existing pier or wharf, the Department should investigate to determine if authority is required to maintain the structure. If the pier meets the criteria set forth in s. 30.13, Wis. Stats., and NR 326, Wis. Adm. Code, no Department action should be considered. If the pier or wharf obstructs navigation or violates any public rights, enforcement pursuant to s. 30.15, Wis. Stats., should be considered. If only private rights are affected, the Department should inform the complaining party that relief may be sought either before a hearing examiner or local court.

If the Department decides to take action against the owner of the pier or wharf, the conservation warden should take the lead in gathering the required evidence. Such evidence might typically include a survey of the pier and adjacent upland, preparation of a depth contour map near the site, taking photos of the site, and obtaining surveys of the adjacent property owner's lots. Bureau and district staff should be
utilized as necessary.

If the Department determines that no public rights are involved, the reasons for this decision should be documented. If the complaining party desires a hearing before an examiner, our policy is to request them to produce a survey of the piers in question, a depth contour map of the offshore area, and a map showing the location of the property lines. Without this information, the complaining party is free to start an action in local court, but we should not schedule a s. 30.14 hearing in the matter.

Upon receipt of an application for a new pier or to expand an existing pier, the Department should determine if any authority is required to construct the pier. If the pier or wharf meets the standards set forth in s. 30.13, Wis. Stats., and NR 326, Wis. Adm. Code, the applicant should be advised that no permits are required and the case dismissed. If a permit is required, the application should be evaluated under Section 30.12, and the procedures set forth in handbook chapter 70 should be followed.

2. Right to Access

The general principle in cases of limited navigation access in coves and bays is that each riparian owner must have a fair share of the line of navigation and a course of access to it from the shore exclusive of every other owner. The line of navigation means the 3 foot depth contour or a greater depth contour if required for boats in use or appropriate for use in the waterway, based on normal summertime low levels in the waterway or summer minimum levels where established by Department order. All specific rules for apportionment or division of the line of navigation are subject to modification as necessary to accomplish this result. (Thomas v. Ashland, Siskiwit & Iron River Logging Railway Company, 112 Wis. 519, 1904.) In this case, the apportioning was made on the basis of the amount of shoreline ownership.

The coterminous riparian rights (so called "Knitter" theory) approach to apportioning access to navigable water involves the shoreline geometry and property line termini. Chords are drawn to connect points established at the intersection of each lot line with the ordinary high-water mark. The lines which bisect the angle formed by adjacent chords are the coterminous riparian rights lines. The extension of the coterminous riparian rights lines to the line of navigation describes the portion of the water within which each riparian may place a pier to gain access to the line of navigation. If the coterminous riparian rights lines intersect before the line of navigation is reached, another method of apportionment will be used.

The instructions in the case Colson v. Salzman, 272 Wis. 397, 1955, regarding depths required for "such boats as are in use or appropriate to the lake" should be applied in conjunction with the "Knitter" theory. Unusual shoreline geometry or ownership patterns will likely crop up often enough to remind us to apply the general principle regarding the right of each riparian to have some access to the line of navigability.

Complaints of navigational infringement are also received which involve straight shorelines, or shorelines other than those in coves or bays. The same basic principle of access applies, although different approaches to extending property lines to the line of navigation are available. In any case, riparians are obliged to confine their piers within the water area proscribed by the shoreline, lines extending from the property termini to the corresponding points on the line of navigation, and the line of navigation.

For round lakes, a point at the center is sometimes established and lines are drawn to it from the property termini to establish the side bounds for each riparian's pie slice area for piers.

For elongated lakes, a center line is sometimes established. Lines drawn at right angles to the centerline from each property termini establish each riparian's area for piers in the elongated portion of the lake. The pie cutting method is used for establishing the riparian pier areas at the rounded ends of such lakes.
The center line approach is used on rivers. For rivers on which Corps' navigation projects exist, the navigation channel center line should be used.

The public right to navigate is of great importance to us. Approaches to assessing this right versus the rights of riparian owners to erect piers are less mechanical than the techniques mentioned above for determining riparian rights.

Factors mentioned earlier about the pier and watercraft in use or suitable for use on the waterway in question must be analyzed. Additional factors include the existence of travel lanes or channels, history of boating or incident uses such as fishing in proximity to the pier, and the existence of a pierhead line.

When all relevant facts have been gathered, they must be evaluated to establish whether the pier obstructs navigation.

**MONITORING AND FINAL DISPOSITION**

If a riparian applies for a permit for a pier and the Department determines that no permit is required, the applicant should be informed in writing. Future monitoring will simply consist of responding to any complaints about the pier, and determining whether the pier, as built, is in violation of any public rights.

If an application for a pier or wharf permit is filed, and the Department determines that a permit is required, the application should be handled as a structure permit under s. 30.12, Wis. Stats. A Division of Natural Resources Hearing examiner may issue or deny the permit after hearing. Any person objecting to the decision may seek judicial review by serving and filing a petition in accordance with the provisions of Section 227.15 and 227.16, Wis. Stats., within thirty (30) days of the decision date.
Subject: Program Guidance, Chapter NR 326, Wisconsin Administrative Code

Chapter NR 326, Wis. Adm. Code, contains standards and definitions for use in regulating construction of piers in navigable waterways. It establishes procedures to be used by the Department and by riparian owners in applications for permits for solid piers, piers which extend beyond an established pierhead line, and piers which exceed the standards contained in the chapter. In addition, procedures are established for use by the Department, riparian owners and the public to handle complaints about existing or proposed piers which violate sections 30.12 and 30.13, Stats.

The rule will not change our traditional posture regarding complaints. A complaint will have occurred when we cannot informally resolve a conflict. To handle a formal complaint, we will apply the procedures and standards of Chapter NR 326 in a formal hearing under s. 30.14 Statutes.

1. Purpose

The rule is intended to clarify the rights of riparian owners, to specify the permitting process which applies to piers mentioned in the first paragraph of this memorandum, and to provide for more consistent application of sections 30.12 and 30.13, Stats. It does not allow us to directly regulate the number of piers a riparian may place on the bed of a waterway. We were advised early in the rule making process that the Department at this time does not have that statutory authority.

2. Applicability

The rule will be applied only in the following situations:

a. Existing piers: If a formal complaint is received and we are obliged to investigate and proceed to a public hearing, the standards of NR 326 will be applied. Any inquiry relative to piers must be responded to with the standards set forth in NR 326. We will not actively seek out for enforcement purposes piers not in conformance with NR 326 unless a formal complaint is received or the pier is causing an adverse effect on public rights in navigable waters.

b. Proposed piers: We will apply NR 326 to a request for information about standards to be applied to pier construction (new piers and changes on existing piers). Where there are existing piers which do not conform to NR 326, strict application of the standards may result in complaints against the existing piers. In this case, we should encourage the municipality to adopt a pierhead line to promote uniformity.

c. Piers not meeting the definition in Section 30.13; These piers (solid piers and piers on cribs and similar
solid foundations) require permits under s. 30.12 and the NR.326 standard will be applied during the permit process.

d. Piers also being used for other purposes, such as a breakwater: A section 30.12 permit will be required for those existing structures upon receipt of a complaint. Modifications which would make the structure wider or longer requires that a section 30.12, Stats., permit application for the whole structure. Any new structures of this type require permits. Section 30.15, Stats., applies to all structures, therefore we will apply the standards of NR 326 upon formal complaint even 'if the structure was permitted previously.

e. Wharves: Wharves were not included in this chapter, because they have apparently never been a major public concern resulting in inquiries to the Department. If problems ever develop relating to wharves, rules addressing those problems will be develop.

3. Definitions and Standards

The definition of pier adopted in this chapter allows the use of temporary boat hoists without a roof or walls. This creates a potential enforcement problem because of the numbers of temporary boat hoists which do include roof or walls. We will have to exercise extreme discretion in undertaking enforcement action only on the basis of roofs or walls over temporary boat hoists. It is possible that a future amendment would be needed to "fine-tune" the definition.

The rule does not specify the number of piers a riparian may place on a waterway adjacent to his or her property. Problems might occur with a backlot development which depends upon a relatively small riparian ownership for access to the waterbody or in a situation where a resort or condominium/hotel complex has a number of piers for guests/owners. We can regulate the length of piers and initiate an enforcement action under s.30.15 against a large number of piers which obstruct the use of an area of water. Unfortunately, section 30.13 does not provide clear guidance here, other than limiting pier rights to riparians.

In the definition, "line of navigation," a three foot depth contour was used as a general minimum for application to all navigable waterways. The language, "required for boats in use or appropriate for use on the waterway," is taken from the Wisconsin Supreme Court cases on piers and can be applied to specific waterways.

Even though a line of navigation standard is included in the rule, it is possible that physical constraints would result in situations where that standard would not be strictly adhered to. For example, if the depth of a stream does not exceed three feet, the rule in theory would allow a riparian to place a pier across the entire stream. Clearly that situation would be an obstruction of navigation and a much shorter pier would be required.

The concept of "depth required for boats in use..." and other Supreme Court guidance are used to deal with individual situations where the general 3-foot rule is not appropriate. It remains for each riparian to demonstrate that boats actually using the pier require greater depth than the 3-foot minimum. The greater depth required (if the riparian can make a successful demonstration of that need) would be used for that specific location. It would not change the line of navigation for the entire water body.

Local usage and common sense must be used by the public and the Department to determine appropriate boats (and thus depths for navigation) for any particular waterway. When we consider commercial navigation facilities, depth of water to accommodate a boat will usually be the project depth for the harbor. Pier length will often be based on the length of boats using the pier. Many commercial piers are solid structures that will require s. 30.12 permits.

The term, "marina," should perhaps have been defined in NR 326. Until a definition is placed in the rule, we
will define "marina" as a commercial facility for rental of boats and/or slips. Note that NR 326.04(8) also applies to "Other similar mooring facilities." These would include such things as:

(a) piers serving multiple ownership/occupancy properties including condominiums, hotels, resorts, etc.
(b) piers providing access to the water for backlot owners.
(c) piers associated with yacht clubs and shipyards.

All marina or other similar mooring facility piers which extend beyond the line of navigation or the prescribed exemptions thereto require a permit under section 30.12, Statutes. The length of these piers is generally dictated by the number of slips rather than by water depth or length needed for individual boats. However, the 30.12 standard prohibiting material obstructions to navigation will limit the ultimate length of such piers. We will apply chapter NR 326 to such piers only upon complaint, as stated in the applicability section of the rule. Size or number of piers cannot be used alone to determine whether a facility is a marina. Complaints on such piers will be addressed on a case-by-case basis.

On controlled lakes or flowages, required water depths for boats will be based on the minimum authorized water level during the open water navigation season. On uncontrolled lakes, depth should be based on a representative water level toward the low end of the range (for example, Corps "Low Water Datum, 576.8 ft IGLD," would be an appropriate level to use for Lake Michigan).

In areas that have been dredged, water depths should be related to an extension of the natural bottom contours on either side of the dredged area. We should also realize that depth below the still water level may not be sufficient in many situations. Where boats are subject to upward and downward movement due to waves, we should allow an additional depth equal to half the expected wave height plus a small factor of safety. We can't assume motors will be tilted up, especially large outboards and inboard/outboards. We also should consider the depth required when a boat has one individual in the back (stern).

Where piers were part of a development previously approved by the Department and the plans or documents involved in that approval indicate the piers, we should consider these piers authorized and only proceed against them on the basis of a formal complaint from outside the Department. In the future, such piers would have to conform to NR 326 or be permitted under s. 30.12.

4. Procedures

The permit process required under section 30.12, Stats., for a solid pier will consider the fact that this type of pier could interrupt littoral drift. The requirement for an opening to allow passage of littoral drift will make the solid pier conform to the statutory standard which prohibits piers that cause the formation of land upon the bed. A solid pier will usually interfere with the free flow of water. The opening for passage of littoral drift should help to compensate for this. Opening size for littoral drift will be determined by the applicant and provided as a part of the necessary information in the application. Internally, this determination will be reviewed by coastal engineers in the Water Regulation Section.

The Department has an obligation under s. 30.14, Stats., to hold hearings on complaints about piers that violate the standards of s. 30.13, Stats., and NR 326. This requirement also, logically, means that we will have to investigate complaints. Where a pier is an obstruction to the public's right to navigate, the Department will fully investigate and document facts, using input from citizens where available. Where our initial investigation determines that public rights are not involved and that private riparian rights are in conflict, we will rely on the complainant to provide a full explanation of the problem created by the pier. As a rule, we should ask the complainant for an adequate survey showing property boundaries and pier locations). This is a reasonable request because the burden of proof is placed on the complainant. Where the complainant cannot do so (by being prevented from going on the property to survey the pier location, for example), we will have to take steps to get
the complainant access to perform the survey or may have to do it ourselves.

Where the only issue is the length of a pier and the depth of water to which it extends, a full survey will not be necessary. A water level reading, measurement of the pier's length, and depth soundings at intervals out to the end of the pier will normally suffice. We would also need information on the type of boat using the pier.

The approaches provided in NR 326.07(3)(a) and (b), to create an adequate separation between adjacent riparians along their common line, will always produce a solution. In some severely restricted situations, there may need to be positive cooperation between the conflicting riparians. We believe that at least one of the three listed methods of defining the areas where a riparian may place piers (by apportioning the line of navigation) will work in most cases. However, the rule does not force us to use any of these approaches if a better method is available. The rule also restates the overall court standard that all riparians must have access to the line of navigation independent of all other riparians.

As you know, the Court of Appeals has upheld the Kenosha County Circuit Court in the Nosek v. Stryker case. We expect that the decision will be appealed to the Wis Supreme Court. Until the decision is final, it will have no affect on NR 326. Once a final decision is issued, we may have to consider amending the rule.

c: Jim Kurtz – LEG/5
   Mike Cain - LEG/5
   Jim Addis - FM/4

0849K
Rafts in navigable waters do not receive clear, concise treatment in Chapter 30, Statutes. They are, however, in common usage on navigable waters throughout Wisconsin. They are located adjacent to piers or within the riparian zone of a navigable waterway for use while swimming. They are used less frequently but at various locations well away from shore by waterskiers as starting platforms and as ski jumps. They are being considered, especially in the Southeast District, for use as boat mooring devices. Use of a raft for mooring would accommodate more boats than a pier.

All three types of rafts are similar with regard to construction of the raft and securing it in position on the navigable waterway. All three types of rafts fit the description of a structure because they have form and utility. The period of the year in which these rafts are used is also similar (the open-water recreation season).

The rafts differ from each other with respect to their location on the waterway. Swimming and mooring rafts are usually located in the near-shore, riparian portion of the waterway. Ski jumping rafts are generally located well away from shore to provide for maneuvering room and sufficient water depth. The area of water needed during use of the rafts also differs. Swimming raft use would most likely utilize the area immediately adjacent to the raft and the lane of water between the pier or shoreline and the swimming raft. The ski jumping raft requires a large area of waterway to support the practice of waterski jumping. The boat mooring rafts require sufficient room adjacent to the raft to allow for boats to maneuver into and out of the slips around the raft.

Common construction practice is to use flotation devices which are secured by timbers or metal structural members which in turn support a deck, finger piers, or the ski jumping ramp. These rafts are commonly restrained by an anchor and connector between the raft and the anchor (e.g., wire rope, rope, cable) or in less frequent instances are supported and restrained in place by piling (or spud poles) driven into the bed of the waterway.

The proposed regulatory treatment for these rafts is as follows: (1) swim rafts would be authorized for use by riparians in an amended version of section 30.13, Stats. The swim rafts would be subject to local regulations under Section 30.77, Stats. (2) Waterski rafts are now and will be regulated by permit under section 30.12, Stats. (3) Boat mooring rafts would be regulated by permit under Section 30.12, Stats.

We will also attempt to develop statutory definitions for these types of rafts in s. 30.01, Stats. This would have to be compared with a proposed definition for fishing rafts in the suggested Wolf River legislation and with the
"fixed houseboat" definition in NR 325. Mike Lutz is working on legislation to allow local regulation of mooring buoys. Our handling of mooring rafts may parallel this effort.

Our present plan for these rafts is as follows:

1. Swim rafts. We will take action only in response to complaints that a swim raft is obstructing navigation or presents a hazard to navigation. We will pursue an enforcement action under Section 30.15, Stats., on the basis of the facts of each case. Abatement options would include moving the swimming raft to a location out of a navigation channel, generally closer to shore, or to add lights or other warning devices to the raft.

Until remedial legislation is developed, we may receive applications for Section 30.12 permits for swim rafts. When we receive an application, we should process it as a routine structure under s. 30.12. If we receive a complaint, the owner of the raft will have the option of applying for a permit. Where enforcement is occurring or impending, we should accept the application and proceed to a joint permit/enforcement hearing. This would be consistent with our approach to regulating piers under ss. 30.12 and 30.13 and would fit in with the proposed remedial legislation. Obviously, this procedure is based on the assumption of a small number of permit applications that will have to be processed.

2. Waterskiing rafts. We will regulate the placement and use of waterskiing rafts by Section 30.12, Stats., permits. An exception to the permit requirement for waterski jumping rafts would be the day-use of a raft which is stored along the shore or on shore when not in use and moved into location on the waterway during periods of use. We will phase in the permit requirement for waterski rafts over a 2-3 year period. We will coordinate the permitting activity with the Wisconsin Waterski Federation. We previously sent you a package of material used by Ed Bourget for staff usage program-wide and an order denying a permit for a water ski jumping raft on Lake Nagawicka.

Each District should, with assistance from the Bureau of Water Regulation and Zoning, develop a plan to phase in waterski raft permit requirements so that all existing rafts are either permitted or in the process of being removed pursuant to Department order by June 30, 1984. The Bureau is meeting with the Wisconsin Water Ski Federation and should have additional thoughts on removal strategy in the next 1-2 months. At a minimum, we will be formally notifying the Federation of our intentions.

3. Mooring rafts ("Star" buoys). While we are not aware of any of these in existence at this time, we will take the position that a s. 30.12 permit is needed and will proceed with enforcement action (s. 30./15) on rafts without permits. To receive a permit, a mooring raft would have to meet the standards in s. 30.12. We will take this position that any such raft which does not (1) meet local regulations governing the placement of piers or rafts in navigable waters and (2) the standards for piers (water depth, separation from adjacent riparians, etc.) found in NR 326 is detrimental to the public interest and may be an obstruction to navigation.

4. Mooring buoys. While these buoys are structures that could require a s. 30.12 permit, we have taken the position that they should be regulated by local permit under s. 30.74, Stats., and section NR 5.09, Wis. Adm. Code. The depth at which mooring buoys can be placed will generally be beyond the line of navigation since a boat will swing in an arc around the buoy.

Our future action plan for these rafts is as follows:

1. Seek a modification of section 30.13, Stats., to allow use of swim rafts that do not obstruct navigation or otherwise interfere with public rights. Modify Chapter NR 326, Wis. Adm. Code, to reflect this amended legislation by including standards for swim rafts. Thereafter- we would administer Chapter NR 326, Wis. Adm. Code, for both swim rafts and piers.
2. Regulate waterski rafts by Section 30.12, Stats., permit.

3. Regulate boat mooring rafts by Section 30.12, Stats., permit.

Procedures for handling the permitting of or enforcement against these rafts are unchanged from past practices. For swimming rafts and boat mooring rafts the approaches included in Chapter NR 326, Wis. Adm. Code, for use in determining allocation of waterway space for piers may be useful in determining the location of these rafts. Our response to complaints about a ski jumping raft will be similar to past actions taken under Sections 30.14, Stats. and 30.15, Stats.

RR:jkb

cc: Michael Cain - LEG/5
    Larry Larson - WRZ/5
    Jim Addis - FM/4

1064H.PERM
COTERMINOUS RIGHTS THEORY

Step 1: Draw shoreline (OHWM) and lot lines

Step 2: Extend lot lines to OHWM
Step 3: Draw chords connecting points found in step 2

Step 4: Bisect angles formed by chords drawn in step 3. Draw in line of navigation at the appropriate depth for the watercourse. Each lot will then have a designated zone of riparian interest.
TO: District Directors (WMC)

FROM: Robert W. Roden

Subject: Interpretation of NR. 326.04(3)(b), LITTORAL DRIFT OPENINGS

We have been asked to provide guidance concerning the requirement of NR 326.04(3)(b) that solid piers shall be provided with sufficient opening to provide for the passage of Littoral Drift and to provide general standards for the size of the opening, the location of the opening and the depth of water where the opening should be placed.

Due to the number and complexity of the variables involved it is not possible to provide "General" standards for these littoral drift openings. Some of the variables that would need to be considered in each case include the local wave climate, bottom topography and bottom material type, size and availability. Determinations on the need, size and location of such openings should be handled on a case by case basis and include, as needed, a site visit, review of performance of similar nearby structures, and discussion with local residents and/or contractors that are familiar with the site in question.

Permits issued for solid piers should include a condition that we may require the addition or modification of littoral drift openings if the structures fail to perform as expected or problems with littoral drift develop in the future.

Reviewed By: John Coke
Scott Hausmann
Mike Cain

JC:EB:sm
7458K
A marina exists with all docks and piers lying behind the line of navigation. Portions of the marina have been approved by DNR (dredging contracts). In regards to this scenario, we have been asked the following questions:

1. Question: Can this marina charge a fee which requires membership in a condominium? Lifetime fees run from $7,300 to $13,150 per slip.

   **Response:** Since in this case all the piers are behind the line of navigation and no permits are required under 30.12(2), the requirements of NR 326.04(8) for public access and reasonable fees do not apply. As long as the standards of 30.13 are met and no permits are required under 30.12, the riparian owner has the right to sell or rent mooring space whether the fees are "reasonable" or not.

2. Question: If the answer to question 1 is yes, can we invoke 30.03(4) "...a possible infringement of the public rights therein..."?

   **Response:** If a case can be made that the marina is an infringement of the public rights in navigable waters, the Department could conduct a hearing pursuant to ch. 227 and issue an order directing the owner to "perform or refrain from performing such acts as may be necessary to fully protect and effectuate the interests of the public in the navigable waters." Such a case would in all likelihood have to be based on more than the fact that fees were being charged, although such would certainly be a factor. Examples of additional factors would be density and size of the mooring area, obstructions to navigation and availability of other access. One potential option for such an order to "effectuate the interests of the public" may be to include conditions requiring a portion of the marina to be open to the public at a "reasonable" fee. Determination of a reasonable fee should be on a case by case basis and based on a capitalization over the design life of the project of the costs of initial construction, operation and maintenance. The fees should include a schedule of rates for different time periods such as daily, weekly, monthly and seasonal based on a proportion of such capitalized costs.
We have been asked to provide guidance concerning the regulation of seasonally removed covered shore stations. Seasonally removed covered shore stations are addressed specifically in two separate administrative rules. NR 325.03(2) defines "boathouse" and in part states "for the purpose of this chapter the term boathouse does not include shore stations or boathouses which are removed from a waterway on an annual basis." NR 326.03(6) defines "pier" and in part states that a pier "...may include a temporary boat hoist without roof or walls."

The two codes may, on initial reading, appear to be contradictory. Because NR 325.03(2) specifically excludes shore stations from the purview of NR 325 it could be construed that covered shore stations are acceptable usage within the near shore area. We, however, interpret NR 325 as not applicable to the regulation of shore stations removed on an annual basis. Section 30.121, Wis. Stats., and the associated administrative code NR 325 are mechanisms for regulating the maintenance of existing boathouses. The exclusion of shore stations (both covered and uncovered) does not authorize the construction, use or maintenance of such structures. Instead, we interpret the exclusion of shore stations from this administrative code as the need to seek legislative authority in some other section of the statutes.

NR 326 allows for shore stations to be adjacent to piers but specifically excludes covered shore stations. George Meyer specifically addressed NR 326's definition of pier within a program guidance dated September 8, 1981. Within that guidance, Mr. Meyer stated:

"The definition of pier adopted in this chapter allows the use of temporary boat hoists without a roof or walls. This creates a potential enforcement problem because of the numbers of temporary boat hoists which do include roof or walls. We will have to exercise extreme discretion in undertaking enforcement action only on the basis of roofs or walls over temporary boat hoists. It is possible that a future amendment would be needed to 'fine-tune' the definition."

The fine tuning Mr. Meyer talked about has to date not occurred. Therefore, the exclusion of covered boat hoists within the definition of pier means that they must be authorized via a separate statute (i.e., Section 30.12) or are technically illegal structures.
Date: March 1, 1990  
To: District Directors

PMMS Response: Insertion: Chapter 75 Water Regulation Handbook

From: Scott Hausmann- WZ/6

Distribution: WRZ Program Staff

Subject: Section 30.12 Permits For Piers

The issue of processing s. 30.12 permits for piers has recently been raised. What has happened recently is that permits are now being applied for by persons whose existing piers may not conform to the draft NR 326 revised standards. The apparent logic for applying now is that a permit issued at this time would ensure that the new standards could not be retroactively applied once the rule is revised to those existing piers that would not meet those new standards.

There would seem to be three situations that need to be addressed in handling these applications. These are:

1). The pier needs to be permitted because it doesn't meet the criteria in existing NR 326. This could occur because of the manner of construction (e.g. rock cribs on inland lake), location on the property (violates "riparian rights line), or length out from shore (beyond necessary depth). NR 326 is to be applied either on complaint or because of a s. 30.12 application. NR 326 and s. 30.13, stats., form the basis for a decision whether a permit is necessary for the pier. The Department should determine whether the permit can be issued in light of the standards in s. 30.12, stats. A pier which violates s. 30.13(l)(a) or (b) would obviously be contrary to s. 30.12 as well.

2.) The pier needs to be permitted because it doesn't meet the general standards of s. 30.13, stats., as elaborated on by the proposed NR 326 revisions. A proposed rule cannot be applied as such until it is legally promulgated. However, if the content of the rule constitutes a logical interpretation of the existing statutes or case law, it can be applied in that context. This means that provisions of the proposed rule could be a basis for Department interpretations of the statutes in the interim while the rule is being developed. However, these provisions cannot be quoted directly as the basis for a decision. Rather, their "authority" derives from the statutes which they interpret and they can guide staff in determining whether or not a permit is required or should be issued for a pier.

3.) The pier doesn't need to be permitted because it complies with existing NR 326 and the general standards contained in s. 30.13, stats., as enunciated in proposed NR 326. In this case, no permit is required and the application should be dismissed.

This seems to cover the situations we are likely to be faced with over the short term. Mike Dresen is currently working on a draft of a more detailed program guidance on evaluation criteria for piers, wharfs, swimming rafts and boat shelters that will be distributed as soon as it is finalized.

Drafted by: John Coke

Reviewed by: Mike Dresen- WZ
Ken Johnson- WZ
DATE: May 3, 1990  IN REPLY REFER TO: 3550

TO: District Directors  (WMC)

PMMS Response: Insertion: Chapter 75, Draft Water Regulation Handbook

FROM: Scott Hausmann - WZ/6

Distribution: WRZ Staff  
Legal Services

SUBJECT: Grandfathering of Certain Piers Placed By Non-riparian Owners

Section 30.131, Wharves and Piers Placed and Maintained By a Person Other Than the Riparian Owners created by 1989 Wisconsin Act 217 (1989 Senate Bill 441) became law on April 27, 1990. The important features of the attached bill are:

1. It applies only to piers placed by nonriparians based on written access easements that were entered into before December 31, 1986.

2. It does not apply to any pier that require permits under ss. 30.12(1) and 30.13.

3. All 6 requirements (subs. (1) to (6)) must be met before the exemption from the requirement that piers be placed only by riparian owners.

4. The law does not affect DNR ability to seek removal when the pier violates any other standards in ss. 30.12 and 30.13.

Related Guidance: None.

Requested By: -

Drafted By: Mike Dresen, Scott Hausman

Reviewed By: Mike Cain

D:EB:pcl
v:\9005\wz9grand.mdd
Attach.
1989 Wisconsin Act 217

AN ACT to create 30-131 of the statutes, relating to wharves and piers placed and maintained on riparian land.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

SECTION 1. 30.131 of the statutes is created to read:

30.131 Wharves and piers placed and maintained by persons other than riparian owners. A wharf or pier of the type which does not require a permit under ss. 30.12(1) and 30.13 that abuts riparian land and that is placed in a navigable water by a person other than the owner of the riparian land, may not be considered to be an unlawful structure on the grounds that it is not placed and maintained by the owner if all of the following requirements are met:

1. The owner of the riparian land or the owner's predecessor in interest entered into a written easement that was recorded before December 31, 1986, and that authorizes access to the shore to a person who is not an owner of the riparian land.

2. The person to whom the easement was granted or that person's successor in interest is the person who places and maintains the wharf or pier.

3. The placement and maintenance of the wharf or pier is not prohibited by and is not inconsistent with the terms of the written easement.

4. The wharf or pier has been placed seasonally in the same location at least once every 4 years since the written easement described in sub. (1) was recorded.

5. The wharf or pier is substantially the same size and configuration as it was on the effective date of this subsection..... [revisor inserts date], or during its last placement before the effective date or this subsection .... [revisor inserts date], whichever is later.

6. The placement of the wharf or pier complies with the provisions of this chapter, and any rules promulgated under this chapter and with any applicable municipal regulations or ordinances.
TO: Water Management Supervisors
    Water Management Specialist
    Water Regulation Staff
    Mike Cain & Mike Lutz - LC/5

FROM: Ken Johnson - WZ/6

SUBJECT: Regulation of piers - Interpretation of Regulations

NR 326 was adopted in 1983 and codified how we regulate piers. Since its adoption many question have arisen. Some have been answered informally or by administrative hearing officers and others have been left unanswered. We are proposing program guidance on these issues to gather the questions and answers in one place for everyone’s use.

We’ll be working on these questions over the course the next few weeks. Please add your ideas about issues (and resolutions) to the list below and get back to me by March 15th or give me a call with your ideas:

What is a Marina or other similar mooring facility? [NR 326.04(8)]
   - How many slips, mooring buoys or related structures are required to be considered a marina or similar facility?
   - Should condos and similar private multi pier facilities be treated the same as a marina?
   - Do marinas and similar facilities located behind a pierhead line require a permit if they extend beyond the line of navigation?

What kind of structures can be located on a pier?
   - Gasoline pump house, ticket stand, fish box, benches, rails, diving platform, deck or storage locker?

What is a license to place a pier and what does it mean (how can riparian legally grant pier use rights to another party)?
   - Should we try to limit the term of such licenses (at what point are property rights conveyed)?
   - Who is responsible for compliance with regulations?

How do we determine the line of navigation?
   - Is a Department approved pierhead line the line of navigation? Do we need to change the rule language to allow going beyond the three ft. contour only for craft “in use or appropriate for use” at the site rather than "on the water way?" [NR 326.03(2)]

What is reasonable riparian access?
   - Does limiting the number of slips, buoys, shelters, etc. per unit of shoreline provide an effective approach?
   - How should/do mooring buoys affect our determinations?

What portion of marinas and similar facilities which extend beyond the line of navigation must be "open to the public?" [NR 326.04 (8)]
   - What facilities must be "open to the public?"
     - percentage of slips?
     - flat number of slips?
     - all facilities beyond line of navigation?
- including parking & other facilities which make public use a practical possibility?
- all of the marina or similar facility?
- definition of "reasonable mooring fee?" [NR 326.04 (8)]

What conditions should be imposed in a permit to assure public availability?

Should/do we treat existing piers or multi pier facilities different from new ones?

cc: Bob Roden   WZ/6
DATE: December 19, 1991

TO: District Directors (WMS)

Insertion: Ch. 75 Water Regulation Handbook
Law Enforcement Handbook

FROM: George E. Meyer - AD/5

Distribution: WRZ Program Staff
Bureau of Legal Services
Bureau of Law Enforcement
Dept. of Justice - Environmental Unit

SUBJECT: Program Guidance - Riparian Berths and Moorings

ISSUE SUMMARY

This guidance deals with one component of the public interest test established by statute for berths [piers and wharves in s. 30.13(1)(a), Stats.] and moorings [buoys and associated components in s. 30.772(2)(a), Stats.]. You should determine if any other statutory criteria listed in the above sections or other public interest factors (e.g. critical habitat, wild or scenic rivers, etc.) would impose greater restrictions on construction and placement before you apply the guidance described here.

1) Berthing and mooring privileges generally accrue in proportion to the amount of shoreline owned.

2) Projects which exceed a threshold number of berths per unit of shoreline are likely to require permit analysis and we may object to such permits because of their cumulative adverse effects on public interests in waters.

3) Projects which exceed the threshold for density of berths but support exercise of public rights in waters may be evaluated differently than private facilities.

4) A riparian may grant a short term license to "rent out" use of berths.

5) A pierhead line [s. 30.13(3), Stats.] should generally conform to the line of navigation.

6) Pier width and accessory construction on piers are limited to what is essential for berthing watercraft.
NEED FOR GUIDANCE AND RATIONALE

Increasing recreational boating demands on our waterways have produced conflicts between riparians over the extent of riparian berthing and mooring rights. Those same pressures also pose a threat to public rights and interests in waterways. Berths and moorings related to marinas and private back lot or condominium development in particular have the potential to cause use conflicts, endanger public safety and over burden aquatic resources.

This guidance is intended to assist in administration of statutes and administrative rules related to the construction and placement of piers and wharves (s. 30.12 & 30.13, Stats. & NR 326) and mooring buoys (s. 30.772, Stats.). It should be applied after and in addition to any other requirements (sensitive resource protection, unobstructed navigation, etc.) which might impose greater limitations on construction and placement.

RIPARIAN BERTHING and MOORING PRIVILEGES ARE LIMITED BY PUBLIC RIGHTS & INTERESTS IN WATERWAYS

Statutes allow a riparian property owner to "construct a wharf or pier... in aid of navigation" without a Ch. 30 permit if it does not interfere with public rights in navigable waters [s. 30.13(l), Stats. includes other standards as well]. Case law has established that a riparian may not exceed a "reasonable use" of property. What is considered reasonable will vary depending on factors which include sensitive resources which limit use of the shoreline or near shore area, other development along the shoreline, the amount of shoreline frontage owned and other issues which affect public rights and interests in navigable waters such as water quality, natural scenic beauty, navigation, etc.

Unless riparian berths and moorings are held to reasonable limits, the near shore area of many waterways will, over time, be largely occupied by these structures and watercraft. Public use of such areas would, as a practical matter, not be possible and public interests in recreational safety, aquatic habitat, water quality and natural scenic beauty would be adversely affected. Wisconsin's Environmental Policy Act [s. 1.11, Stats. & NR 150.22(2)] requires the Department to consider the cumulative environmental effects of these activities and to exercise its regulatory and management authorities to avoid significant adverse effects. These facts in combination require us to provide guidelines which identify the threshold beyond which there should be a more rigorous evaluation to determine whether a riparian owner may have exceeded reasonable berthing and mooring privileges and adverse effects on public rights and interests in navigable waters are significant.

IMPLEMENTATION OF GUIDANCE - PIER AND WHARF CONSTRUCTION

1) Proposals for pier or wharf construction which exceeds a "reasonable use" threshold will require permit analysis to determine if cumulative and long term adverse effects on public interests in navigable waters are significant. We will continue to require permit analysis for proposals where we expect that other legal requirements may not be met (s. 30.13, Stats. standards).

2) We will object to such permit applications if permit analysis reveals that standards in s. 30.12(2) including a cumulative impacts analysis based on "reasonable use" criteria will not be met. Commercial and industrial facilities which demonstrate a need for greater construction or marinas and similar facilities (described below) may qualify for a greater number of berths or moorings than would otherwise be available for a similar amount of frontage. Proponents of these projects must demonstrate that their project will comply with appropriate standards.

3) We cannot simply cite the guidelines described below ("reasonable use" threshold, pier width, etc.) in
denying permit applications. They are not rule or statutory standards. Any objection or permit denial must state how the proposal which exceeds the threshold or guidelines in combination with similar future projects would not comply with statutory requirements by adversely affecting particular public rights and interests in a particular water.

"REASONABLE USE" THRESHOLD

Provided other legal requirements are met [s. 30.13(l) & 30.772, Stats. & NR 326], the "reasonable use" threshold is reached when a property exceeds two berths for the first 50 feet or lesser amount of shoreline and one berth for each additional 50 feet of shoreline in common ownership. We will define a berth as a space at a pier, wharf, boat hoist, boat shelter, or boathouse (wet or dry) for a single watercraft appropriate for use at the site and commonly in use at similar sites on the waterway. (As an example, a 100 ft. lot with a dry boathouse which has space to berth a single watercraft and a pier which provides space for berthing at either side would provide berths for a total of three watercraft and would not exceed the threshold.) Multiple owner lots such as condominiums, "access lots" or other similar ownership arrangements are not entitled to greater berthing privileges than the shoreline frontage would otherwise provide (2 for the first 50 ft. & 1 for each additional 50 ft.).

MOORING BUOY AUTHORIZATION

The term "mooring" is specifically defined [s. 30.01(3e), Stats.] Placement of such structures is governed by separate statutes (s. 30.772 & s. 30.773, Stats. for designated mooring areas) which administered by Department law enforcement personnel. Permits are not required for mooring buoys placed within 150 ft. of the ordinary highwater mark (OHWM) or within 200 ft. of the OHWM when permitted by local ordinance if mooring placement and use comply with statutory standards which are substantively the same as for piers and wharves placed without permit [s. 30.13(l), Stats.].

Among these standards is a requirement that such placement and use may not "interfere with public rights or interests in the navigable waters." A riparian owner does not have an implicit or explicit right to fill his entire riparian zone out to 150 ft. from the OHWM (or 200 ft. by local ordinance) if this would interfere with public rights and interests. This public interest determination should include an analysis of cumulative effects of similar repeated mooring placement and use and a consideration of the "reasonable use" guidelines provided in this memo. These factors should be considered by law enforcement personnel when: 1) reacting to complaints or concerns about individual mooring placement; 2) approving local mooring ordinances [s. 30.772(3), Stats.]; and 3) approving designated mooring areas (s. 30.773, Stats.). This "cumulative effects" concern is only one among many that must be addressed when making such decisions. Successful implementation of these provisions will require cooperation and assistance across Department programs.

In approving permits for piers under s. 30.12, Stats., water regulation personnel should impose conditions which prohibit or limit the placement of moorings in adjacent waters if permit analysis determines that such placement in combination with the permitted pier or wharf construction would interfere with public interests in waters. In such cases permits must cite authority under s. 30.772, Stats. and include appropriate findings of fact and conclusions of law related to standards in that statute. As a practical matter this means that we will require riparians to choose between pier and mooring placement where placement of both will interfere with public rights in waters. Where limitations on mooring placement are included as a condition in a pier permit, water regulation personnel will obtain concurrence from appropriate law enforcement personnel prior to issuing the permit and will provide them a copy of the permit when issued.

MARINAS AND SIMILAR FACILITIES
We will treat all proposed berthing facilities as "marinas and other similar mooring facilities" subject to provisions of NR 326.04(8) if:

1) they require s. 30.12, Stats. permits (not designated mooring areas);
2) they are not industrial or commercial shipping facilities; and
3) they exceed reasonable use criteria described above

Such facilities must be open to the general public and comply with s. 30.12(2), Stats. permit standards to qualify for berthing beyond reasonable use criteria. This treatment of marinas and similar facilities is reasonable if they function in support of exercise of public rights in navigable waters, i.e. they provide access to waterways and related services.

In order to qualify, such facilities must provide all berthing facilities which exceed the "reasonable use" guidelines to the general public free or for a reasonable fee.

It is not necessary to designate a proportion of facilities for transient users since demand for particular boating related services (fuel, food, mechanical service, etc.) will decide need for transient docking.

A reasonable fee is one comparable to those charged the general public for similar facilities on the waterway or on a similar waterway in the vicinity. Use of berths may not be conditioned on membership in a private club or the purchase of property, goods or services.

If berths are for rent on a seasonal basis, permit conditions must assure that such facilities are available to the general public and are not, as a practical matter, restricted to private clientele:

1) the public must be adequately notified of their availability;
2) reasonable public access to the facility and appropriate parking must be provided; and
3) a waiting list for rental must be maintained which is continuous from year to year.

These features and any others necessary to assure public availability should be included as conditions in any required permits.

EXISTING BERTHING FACILITIES

Existing berthing facilities which exceed "reasonable use" guidelines may continue to rely on any permit which authorizes specific construction. This remains true unless significantly changed conditions and resulting effects on public rights require permit revision (the Department maintains continuing jurisdiction over such projects). The Department may apply "reasonable use" criteria and require modification or commence and enforcement action against any existing facilities (particularly those undergoing major repair) for which a permit has not been issued if it finds that current statutory requirements have not been met. Generally we will not hold existing facilities to the same "reasonable use" guidelines which we will apply to new proposals since, to some extent, they may have established some limited interest in use of existing facilities.

LICENSING OF BERTHS

Only a riparian owner, one who holds title to lands abutting a navigable waterway, may place or "construct" a
pier or wharf and related berthing structures. Another party may do the actual work as agent for a riparian but the riparian retains full ownership of the structure as well as responsibility for its legal placement and maintenance (permits et al.) A riparian may grant a revocable license for use of his private berthing facilities. A license should be limited to a short period (generally less than 5 years). Granting a license for use of berthing facilities to another party does not expand a riparian's "reasonable use" threshold (2 berths for first 50 ft. of frontage, etc.) Easements, leases and other agreements do not convey to a nonriparian the right to independently construct, place or maintain a pier or related structures because they do not transfer title to land. Statutes allow only riparian owners to place piers and other structures [with the exception of "grandfathered" easements under 30.131 (April, 1990 revision)].

RELATIONSHIP OF PIERHEAD LINE TO LINE OF NAVIGATION

A pierhead line is established by municipal ordinance [s. 30.13(3), Stats.]. In addition to the public rights test required by statute [s. 30.13(3)(b), Stats.], the rule standards related to pier length apply to the Department's pierhead line approval decision. Generally, piers may extend to the greater of boat length, the 3 foot water depth contour or to a greater depth contour if required by the draft (not the number) of craft using the pier [NR 326.04(1)]. A pierhead line can be viewed as an administratively established line of navigation except in those cases where public rights concerns require it to be located closer to the shoreline than the line of navigation. Rather than a fixed distance from shore or the ordinary highwater mark, a pierhead line should "conform as nearly as practicable" (see s. 30.11, Stats. for bulkhead lines) to the depth contour at the line of navigation. The establishment of a pierhead line affects only pier length. Any pier construction within a pierhead line must meet other applicable requirements including "reasonable use" guidelines.

The Department should consider procedures to revoke approval of any pierhead line that significantly departs from these standards and that is detrimental to the public interest in navigable waters.

PIER AND WHARF WIDTH AND ACCESSORY CONSTRUCTION

A maximum width of 6 feet for piers and wharves is reasonable unless the owner can demonstrate that a greater width is essential for berthing the type of watercraft to be located there. This width allows the limited use prescribed for these structures by statute, i.e. loading and unloading of cargo and passengers from watercraft [s. 30.01(5), Stats.] A 6 foot width allows persons to pass safely on a pier or wharf and provides adequate room to set aside recreational gear during loading and unloading. Incidental uses such as fishing or swimming are those which are related to navigation and do not require the physical dimensions of a pier or wharf to be altered beyond what is required to provide navigation access. The private appropriation of lake or riverbed for the construction of decks for general outdoor living activities is not incidental to navigation and is inconsistent with the public trust doctrine. Commercial shipping or industrial facilities may qualify for a wider pier or wharf if they can demonstrate a need and lack of reasonable alternatives.

A pier or wharf may include only the following accessory equipment:

a. Seasonal boat shelters or hoists that meet NR 326 standards (must be connected to uplands by a pier).

b. A single bench of open construction and reasonable length.

c. Open railings or boarding ladders where required for safety.

d. Marine rails (trolley) that allow for removal and upland storage of watercraft and that are adjacent and ancillary to a pier.
e. White, amber or blue reflectors of reasonable dimensions. The limitation on color is to avoid confusion with other standard navigation lighting.

f. Lighting for safety or to facilitate docking may be included and should be down-focused, non-intermittent white or yellow light (consistent with NR 326 standards for boat shelters).

Roofs, walls and advertising signs may not be included on a pier or wharf. A sign of reasonable dimensions to identify the property is permissible.

Flotation devices for piers and wharves should meet the following standards (consistent with the provisions for floats for fishing rafts in NR 324.11):

  a. They must be free of any product residue or pollutants.

  b. They must not include any container previously used to store toxic or hazardous material as defined in NR 181.12.

  c. Metallic flotation devices must be coated or painted if necessary to prevent corrosion.

  d. Flotation devices must be securely attached to the pier or wharf and maintained in a serviceable condition. Floats of expanded polystyrene beads, polyurethane or similar materials which may fragment must be coated or contained to prevent break-up. (Western District has two cases in La Crosse County Circuit Court to support this position.)

Piers and wharves should be limited to colors which are not visually obtrusive as viewed against the shoreline. Piers along developed shorelines should not be conspicuous among nearby piers and other near shore construction. Generally, white or earth tone structures are acceptable on developed shorelines.

Piers that exceed the above guidelines or contain additional accessory construction will require permit analysis under s. 30.12(2), Stats. and should be presumed to interfere with public rights in navigable waters.

Commercial shipping or industrial piers and wharves and those associated with marinas and other similar mooring facilities may include additional construction such as fueling, sanitary service or safety facilities which are essential for commercial navigation and for which an upland location is neither feasible nor practical. Facilities such as tour boat ticket booths, waiting areas, fast food stands, general merchandise sales, vending machines, tables, canopies, umbrellas, decks, etc. are beyond what is essential for navigation purposes and may not be permitted.

Related Guidance: Updates and supplements Interim Guidance of July 2, 1990
Requested by: Districts
Drafted by: M. Dresen and K. Johnson
Reviewed by: Robert Roden - WZ/6  
  Ralph Christensen LE/5  
  P. Scott Hausmann WZ/6  
  Bill Engfer LE/5  
  Michael Cain LC/5  
  Michael Lutz LC/5
This guidance is being issued to assure that violations of regulations governing piers are handled in a consistent manner throughout the state. Please keep in mind that Manual Code 4112.1 identifies who is responsible for the actions described below.

PROCEDEURE (PIERS)

Upon notice of violation that a pier is constructed contrary to state law (including section 30.12, 30.13, or NR-326) the following steps should be taken (note: "Notice of Violation" means a complaint by a citizen, other Department staff, or the discovery of a nonconforming pier during other related work.... for example, discovering a nonconforming pier while completing a zoning inspection or a permit application inspection on the same property or near-by property):

1. Complete an on-site investigation to determine:
   a. why the pier is nonconforming;
   b. if the structure in question poses an imminent danger to people or property or if it constitutes a material obstruction to navigation;
   c. if public rights or interests in navigable water are involved; and
   d. what measures could be taken to bring the pier into conformance with the law.

2. If the pier poses an imminent danger to people or property or is a material obstruction to navigation or is constructed in violation of conditions of any permit that may have been issued, immediate steps should be taken to abate the problem. If the owner refuses to voluntarily abate the problem, a citation under section 30.15 Stats. or a complaint under 30.12 Stats. should be issued after consultation with District Water Regulation and Zoning staff and the Warden Supervisor. The court should be asked to order abatement as part of the final disposition of the case.

3. If the complaint was brought by a citizen and the investigation indicates that there are no public interests involved, the results of the investigation will be provided to the complainant, along with a statement that the Department will take no further action unless the structure poses a danger to other riparian property owners (if so, proceed under #2 above). A copy of section 30.14 Stats. and NR 326 should also be provided to the
complainant.

4. If after investigation it is determined that no imminent danger exists but that public interests in navigable waters are involved, the following steps should be taken:

   a. Contact the owner of the nonconforming pier either in person or by phone. Explain clearly why the structure is nonconforming, what can be done to remedy the situation (may be several options: removal, reduce size, change location, etc.), and how long the owner has to correct the violation (normally we should allow at least one construction season).

   b. Follow up with a letter to the owner repeating exactly the information provided in "a" above. Ask the owner to notify you, in writing and within a reasonable period of time, what the owner intends to do (corrective action and time frame).

   c. If the pier owner refuses to do anything or fails to make necessary changes in the time allotted, notify the owner in writing that the case will be referred for prosecution and court ordered restoration or for an administrative enforcement hearing where restoration will be sought. The determination whether to issue a citation or refer the case for administrative hearing should be made jointly between the warden and the water management specialist.

Violations of any permit which has been issued for a pier should be handled in the same manner as any other violation of a Ch. 30 or 31 permit.

PROCEDURE (BOAT SHELTERS)

Boat shelters [see s. 30.01(1c), Stats., for definition] may be either permanent or may be removed seasonally from the waterway. Permanent boat shelters require a permit under s. 30.12(3), stats. Seasonally removed boat shelters are considered to be part of a pier [see definition of "pier" in s. 30.01(5)]. Procedures for seasonally removed boat shelters will generally parallel those outlined above for piers because the boat shelter and the remainder of the pier must be considered one structure and the on-site investigation will have to address the entire structure. We should not actively enforce seasonal boat shelter removal unless the boat shelter constitutes a serious problem such as a material obstruction to navigation, poses a danger to others, or was constructed in violation of a permit that may have been issued. More detailed guidance is being provided in a separate memorandum.

Reviewed by:
   Mike Cain
   Mike Lutz
   Ralph Christensen
   Bob Roden
DATE: July 8, 1994

TO: District Directors

Distribution: Water Regulation Staff
             Law Enforcement Staff

Insertion: Ch. 75, Water Regulation Guidebook

FROM: John Fryatt

SUBJECT: Enforcement of Removal of Seasonal Boat Shelters

Section 30.12(3)(a)6, Stats., and section NR 326.055, Wis. Admin. Code, regulate the placement of permanent boat shelters in navigable waters. Section 30.01(1c) and (5), Stats., and section NR 326.055 contain provisions regarding "seasonal" boat shelters, i.e. boat shelters which do not have permits and which must be removed from navigable waters between December 1 and April 1 of the succeeding year. This guidance defines the situations under which the Department will actively pursue the removal of seasonal boat shelters.

What constitutes a seasonal boat shelter?

A seasonal boat shelter may or may not contain a boat hoist. In addition, a seasonal boat shelter may or may not have a roof or cover [see ss. 30.01(1c) and (5), Stats.]. This means, in effect, that any structure which performs the function of a boat shelter (providing a berth place for watercraft) and which does not have walls or sides (which would make it a boathouse) is subject to ss. 30.12(3)(a)6 and 30.13, Stats., and section NR 326.055, Wis. Admin. Code. This means that the typical "boat hoist" or "shore station" falls within this definition and must be dealt with in the same manner as boat shelters with roofs or covers.

What action can be taken to achieve compliance?

The owner of a boat shelter has two basic alternatives. First, the owner may apply for a permanent boat shelter permit under s. 30.12(3)(a)6, Stats. If the permit is issued, the shelter may remain in place year-round, and enforcement would normally be limited to obtaining a forfeiture or fine if the boat shelter had previously been in violation. If the permit is not issued, or the owner refuses to apply for one, then we should be seeking a court (or administrative) order for removal of the boat shelter, or a removal order and a forfeiture/fine. [Note: NR 326.055(4) contains restrictions on when a permit may be issued. For example, permits for permanent boat shelters may not be issued for most lakes or flowages under 500 acres, or for shorelines which are not "developed".] The removal of a roof or cover, or of a boat hoist, does not constitute removal of the boat shelter; the entire structure must be removed from the waterway [NR 326.055(3)(a)].

When are we required to actively enforce the removal requirement?

Seasonal boat shelters are defined by statute as part of a pier. Therefore, the provisions of ss. 30.13 and 30.14, Stats., and the applicability requirements of Ch. NR 326 must be followed. Briefly, NR 326 requires us to apply the standards in NR 326.055 when:

1. a riparian, municipality, or other person complains that a seasonal boat shelter is in violation of s. 30.12 or s. 30.13, Stats.; [MISSING PAGE]
2. If no other boat shelters already exist adjacent to the property, the permit should explicitly state that any additional boat shelters beyond the one being permitted must be seasonally removed.

3. The permit must be conditioned on seasonal removal of all boat shelters if a boathouse is subsequently constructed on the property within 75 feet of the ordinary high water mark.

These permit conditions should be enforced in the same manner as any other water regulatory permit conditions. This means we should maintain normal enforcement discretion, i.e. any significant violation should be pursued, whether or not it creates a serious safety hazard.

Please make sure that your Water Regulation and Zoning and Law Enforcement staff are aware of these requirements.

Attach.

Reviewed by:
   Ralph Christensen
   Mike Lutz
   Bob Roden
   Mike Cain
NR 326 INFORMATION SHEET

Thank you for your interest in Wis. Administrative Code NR 326, particularly as the rule relates to aesthetic impacts of boat shelters on our navigable waters. We hope this information sheet will answer most of your questions. If you have additional questions concerning this rule, feel free to call Ken Johnson at 608-266-8036.

WHAT IS THE HISTORY OF THIS RULE PROVISION?
In 1988, the Legislature passed a comprehensive rewrite of Chapter 30 which included new provisions defining temporary and permanent boat shelters and allowing the Department to create rules regulating their construction. Section 30.12(3)(c), Stats., directed the Department to "establish minimum standards to govern architectural and aesthetic features of boat shelters..." and "...to minimize the visual intrusiveness of a boat shelter with respect to the surrounding body of water and shoreline." In response to this legislative directive the Department amended NR 326 to include a provision that addresses shoreline aesthetics. Prior to 1991, there were no standards for size, shape and color of these structures and the de facto color of choice for boat shelter roofs or covers became white, a color that clearly stands out against natural shorelines.

ARE AESTHETIC CONSIDERATIONS FOR STRUCTURES IN NAVIGABLE WATERS NEW?
No! The State of Wisconsin's and the Department's consideration of aesthetics during review of waterway construction projects has a long history. The Legislature amended s. 31.06 Wis. Stats., in 1929, which allows the Department to grant permits to construct dams, and specifically required the Department to consider scenic beauty as a public right that must be protected. The Supreme Court, in a 1952 landmark decision Muench v. Public Service Commission, declared that the State had a duty to protect the public's enjoyment of natural scenic beauty as part of its navigable waters public trust responsibilities under the Wisconsin State Constitution. Almost 30 years ago when it created the Shoreland Amendment Act, the Legislature specifically included the protection of the shoreline's natural beauty as a goal and as part of the zoning ordinance standards that county governments are required to enact. The Court in 1971 again spoke to the issue of aesthetic impacts when it ruled that scenic beauty on its own is a proper basis to evaluate permit application for a boathouse. Following the direction of the Court and the Legislature, aesthetics is a consideration for the agency every time we review a permit application for construction projects in the public trust waters of the state.

WHAT COLORS ARE ALLOWED OR PROHIBITED BY THIS STANDARD?
There are no colors that are absolutely prohibited or required. Visually intrusive is defined within the rule as "clearly standing out from the shoreline background because of color or reflectivity when viewed from out on the water during the time when leaves are on deciduous trees." (Deciduous trees are those which lose their leaves seasonally, emphasis added). If the background colors are primarily green, then a solid green color complies with the rule. Likewise, if the background colors are primarily gray, then a solid gray roof or cover would comply with the rule. Further, in developed areas where the background colors are primarily white, a solid white roof or cover would comply with the rule.

WHAT'S THE BOTTOM LINE AND WHERE IS THE DEPARTMENT GOING WITH THIS RULE?
The Department's goal with this rule is to gradually have boat shelter covers change from the colors that clearly don't blend in with the background to colors that do blend in with the background. In 1991, when the rule was amended by the Natural Resources Board, the intent was to allow those people who have invested in shelter covers that don't blend in with the background to make reasonable use of their shelters. Compliance would be required when it came time to replace those covers based on wear and tear and serviceability. The Department still believes that concept makes sense and compliance shouldn't place an additional economic burden on any individual at the time of replacement.

The rule requires owners to comply by January 1, 1996. We realize that one concern with the compliance deadline is that there are many covers currently in use with a good deal of wear left on them. We are not requesting owners to dye or paint their covers to comply with this rule. The Department has no intention of
taking enforcement actions on existing covers in perfectly good condition and will enforce the visual intrusion standard only on a complaint basis. Even after complaint, we will exercise discretion and only take action in egregious situations.

Our intent is not to assume the role of aesthetic judge and jury but rather to fairly and effectively administer the laws we've been provided. While some individual choice may be restricted by this rule, it will also serve to establish minimum standards which in turn should help to protect private property values. In time, we believe that the general public and those who own land adjacent to Wisconsin's lakes and streams, will appreciate this investment in preservation of our state's natural scenic beauty.
CORRESPONDENCE/ MEMORANDUM

DATE: April 4, 1995
TO: District Directors
Insertion: Ch. 75 Water Regulation Handbook
FROM: P. Scott Hausmann - WZ/6
Distribution: WRZ Program Staff
SUBJECT: Program Guidance - Piers Utilized for Water Ski Shows

ISSUE SUMMARY:

This document provides guidance for evaluating permit requests for the placement of pier structures on the bed of navigable waterways for water ski competitions and shows. Specifically at issue is the allowable dimensions of the structure. We have determined that in certain situations it may be appropriate to permit a platform-like pier (called a "starting dock") to be utilized for public water ski events. This guidance discusses those limited situations when this deviation from the previously established reasonable width standard of 6 ft. (see 12/9/91 WZ Program Guidance) would be determined to be consistent with the public trust. A "reasonable use" dimensional guideline for these piers is also established in this document.

PUBLIC TRUST CONSIDERATIONS

A s. 30.12(2), Stats. permit is required for these structures since they exceed what is typically needed for loading passengers and cargo. As with all structures evaluated under s. 30.12(2), Stats., a water skiing pier or "starting dock" may not be permitted if the proposed project would interfere with public rights in navigable waters (e.g. materially obstruct navigation, be detrimental to fish and/or wildlife habitat, adversely affect water quality, adversely impact natural beauty).

In addition to addressing the public interest criteria discussed above, the applicant must demonstrate:

- the need for a platform-like structure based on the types of water skiing events which will be held,
- that the pier structure and associated use will provide significant* public recreational benefit (is not solely for private use),

  * factors such as projected frequency of use, audience size, club affiliation (e.g. WWSF, NSSA, AWSA), shall be considered when determining if public benefit is significant
- that the events associated with the structure will be open to the public without charge or for a minimal fee,
- that the structure will be utilized solely to support water skiing events and will not be utilized as a "deck" when ski shows are not occurring.

Why This Position? Although these platform-like structures exceed what we would normally approve for individual riparian use, the fact that these ski shows have water-related entertainment value for the public at large
justifies a modified standard. We anticipate only a limited number of requests for permits for structures that would meet all of the public interest requirements listed above. This reduces the potential for any significant cumulative impacts. Limiting the allowable size of the structures will also help assure that impacts are minimized. Additionally, statutory criteria and other public interest requirements (e.g. critical habitat, navigation) which might impose greater limitations on construction and placement of the structures must be determined before applying this guidance.

Do These Events Require a Wider Pier Structure? In some cases, yes. The largest events (i.e. the national tournaments) may have over 20 people on the main dock at one timeline including safety personnel to "spot" the stunts. Typically the skis are lined up in a row with the skis utilizing 4 ft. of the dock width. At the far end of the dock, a 2’ wide area running the length of the starting dock is devoted to storing and handling of the ropes. This area is separated from the rest of the dock by a backdrop for safety reasons and so that the rope handling is not visible during the performance. The remaining width is the area left for accommodating safety spotters, safety personnel and used for performance routines, dances and stunts that are often associated with these shows.

DESIGN REQUIREMENTS

The diagram on the following page shows the "reasonable use" dimensions of the starting dock (12 ft. by 24 ft.)* However only the minimum size necessary to meet the direct water ski related use should be permitted to assure that impacts on navigable waterway are minimized. Dimensions exceeding "reasonable use" should be presumed to be inconsistent with the public trust and should only be permitted if the applicant can present compelling reasons as to the need for a larger structure. The desire for additional space for theatrical and dance routines and stunts which could be performed on shore will not be considered valid reasons for a larger structure. Additionally, these larger structures should not be permitted if the project would interfere with public rights in navigable waters. The maximum access pier width of 6 ft. shown below is consistent with the established maximum pier width standard. In some cases a 4 ft. water depth may be required to accommodate take-off with the tow boat. In these situations it may be possible to angle the pier in such a way that the boat can take off in deeper water rather than permitting a structure which extends out to a deeper contour. If the pier is to be placed at an angle, this does not mean that the overall size of the structure will be allowed to exceed the established "reasonable use" guideline of 12 ft. by 24 ft.

*12 x 24 ft. is the minimum size requirement for competition rules established by the National Show Ski Association.

Any "backdrops" or other types of vertical walls and associated supporting material placed on the starting dock for events must be removable. Permits must require that this part of the structure be removed after each event to minimize visual intrusiveness.
DIAGRAM:

Related guidance: Riparian Berths and Moorings, dated 12/19/91
Drafted by: Kate Fitzgerald – WZ/6
Reviewed by: Ken Johnson – WZ/6
Michael Cain – LC/5
DATE: April 12, 1996

TO: District Directors

Distribution: Water Regulation Staff
Law Enforcement Staff

Insertion: Ch. 75, Water Regulation Guidebook

FROM: Scott Hausmann - WZ/6

SUBJECT: 1. complying with Standards within NR 326.04(8) which require that marina and similar facilities be open to the public. 2. Riparian status of condominiums. 3. Suggested permit conditions.

As you are aware NR 326.04(8) requires that marinas and similar moorings facilities must be open to the public.

(8) Piers associated with marinas and other similar mooring facilities shall not extend into the water from the shoreline beyond the line of navigation unless a permit is obtained under s. 30.12 (2), Stats. Such marinas shall be open to the public. Use of the facility by the public may be conditioned only on the payment of a reasonable mooring or anchoring fee.

Note: As an example, the use of such an extended pier shall not be conditioned upon membership in a private club or organization, purchase of a parcel or property, or purchase of a boat.

George Meyer's December 19, 1991 guidance on "Riparian Berths and Moorings" discusses this issue at some length and should be part of your permit analysis for high density pier developments. While that guidance still accurately articulates our thoughts on marinas, I want to be sure that our permit record reflects our consideration of and compliance with the "open to the public" requirements of NR 326.

Accordingly, I suggest that you routinely ask, document and consider the answer to these questions when a marina or similar facility is involved.

1. How has the marina historically been operated or, if it is a new marina, what is the proposed operation? ie., hours of operation, services provided, number of mooring buoys, number of slips, moorage fees, launching fees, availability to the public for access to the structures for fishing and other incidents of navigation.

2. Who will own the marina and the riparian land now and after permitting?

3. Will slips be leased to the public? If so:

   - you should request a copy of proposed lease.
   - you should inquire how the public will be notified of availability of rental initially and in the future.
   - will a waiting list be maintained? If so how and where?
- will the general public have access to the structures for fishing, sightseeing, etc., and under what terms?

Lease terms of interest include cost and length of lease. Five year leases are acceptable but we prefer seasonal or shorter periods. Leases of extremely long periods may be considered a conveyance of property under Wisconsin Law and could be prohibited under public trust law as an improper conveyance of public rights. Also, s. 30.133, Wis. Stats., prohibits the conveyance of riparian rights by easement or "similar conveyance". At some point a long term lease may become a "similar conveyance".

Reasonable fees can in most instances be determined by a comparison to "going rates" in other similar public marinas in the area. The proposed fees should be compared to mooring fees at other facilities but may include additional charges from direct ancillary services to mooring. Upland non-navigational amenities such as pools and health clubs should not be considered as justification for higher "reasonable fees". Allowing consideration of these upland amenities would violate NR 326.04(8) in effect requiring membership in a club or organization as a prerequisite to obtaining use of the pier.

If notice to the public is through advertisement, it should be in a paper likely to be read by those regularly using the lake or river system. Unmet demand should be accounted for by the applicant by maintaining a continuous first come first serve waiting list. Available slips should first be offered to people on the waiting list followed by notice/advertisement to the public.

If the slips are not leased for short terms at reasonable fees, the applicant is not entitled to a pier that is beyond levels appropriate for an individual private riparian (see the December 19, 1991 guidance referenced above). When applying the concepts in the 1991 guidance remember that the reasonable use doctrine is a concept developed in case law that requires individual analysis. Administrative law judges have recognized that our 1991 guidance is a good starting point when considering reasonable use but the test is still site specific. The following quote from a recent Administrative Hearing decision (2-SD-93-2124), reflects the common law test in Wisconsin:

What constitutes a reasonable use, under the common-law test, is a factual determination, varying from case to case, and subject to a trust doctrine concept that sees all natural resources in this state as impressed with a trust for usage and conservation as a state resource. State ex rel. Chain O'Lakes Assoc, v. Moses, 53 Wis. 2d 579, 582,193 N.W. 2d 708 (1972).

Factors to be taken into account include: "... the subject matter of the use, the occasion and matter of its application, its object, extent and the necessity for it, to the previous usage, and to the nature and condition of the improvements upon the stream; and also the size of the stream, the fall of water, its volume, velocity and prospective rise and fall...." Timm v. Bear, (1871), 29 Wis, 254, 265.

The evaluator should determine if the individual proposal is consistent with the types of use that are commonly made of the waterbody and whether or not the expectations of the applicant to develop the proposed pier are reasonable.

If the marina has private berthing spaces at levels within a reasonable private riparian use, we will generally not be opposed to the application provided other resource concerns are not interfered with. However, we still need to verify that the pier is held by riparian owners with "real" interest in riparian uplands. Generally, condominium (dockominium) form of ownership can be acceptable provided that the condominium documents actually convey riparian interest rather than simply a cube of air or water.

If the condominium form of ownership is being used, you should request a copy of the condominium declaration as well as any articles of incorporation and bylaws of the condominium association. The condominium declaration will determine if there are multiple riparian owners (requiring multiple signatures on the application) or whatever a single condominium association can represent the interest of all unit owners. I recommend that the
condominium declarations be reviewed by legal services prior to issuing any permit to a condominium under s. 30.12, Wis. Stats.

As always, the findings of fact of the permit should appropriately document what action is being considered by the Department. As part of the Findings of Fact for marinas I suggest you include:

- length of frontage, number of piers, number of slips, number for public rental, proposed terms of leases, overall purpose of proposal, determination of reasonable number of private berths for the shoreline owner.

If a permit is granted for a marina, it should be appropriately conditioned to insure that it will remain open to the public throughout the life of the structure. I suggest the following conditions be considered within the permit for any pier with public moorings:

1. You must charge no more than a reasonable fee for the slip (or mooring) rentals. Reasonable fees are moorage fees charged the general public at similar facilities in the vicinity.

2. You must provide adequate upland access including parking for the general public, consistent with the number of slips offered for rental to the general public.

3. You must maintain a first come first serve waiting list and advise those individuals on the list of any available slips. This waiting list must be made available to Department personnel upon request.

4. You must initially notify the public of the availability of slips by advertising in the -------- paper for a period of not less than seven days. Thereafter, you must seasonally advertise the availability of slips in the same paper whenever the waiting list is depleted.

5. The Department reserves even the right to further restrict the number of moorings or docks or revoke this permit if it finds that the pier is not being offered for rental to the public.

6. The Department may modify or revoke this permit if the project becomes detrimental to the public interest.

7. No mooring buoys beyond those expressly authorized by this permit are allowed without modification of this permit.

(Conditions number 8 and 9 should only be used where appropriate and where the owner agrees with the restriction)

8. All portions of the pier used for public slips must also be available to the public for use (possible uses might be a promenade or for fishing) during all daylight hours.

9. The Department reserves the right to further restrict, condition, modify or revoke this permit if it finds that the pier is not being adequately offered for use to the public.

Related Guidance: This guidance supplements the guidance by George Meyer of December 19, 1991 regarding riparian berths and moorings

Drafted by Ken Johnson - WZ/6
Reviewed by:
  Mike Lutz
  Mike Cain
PIERS IN WISCONSIN WATERWAYS

Riparian owners have certain privileges to the use of the water and shore - this includes the right to place a pier or wharf as an aid to navigation. Riparian rights are exercised subject to the public trust. Following is a summary of some of the law the Department of Natural Resources must apply in its regulation of piers in Wisconsin.

THE CONSTITUTION
The Public Trust Doctrine emanates from Article IX, Section 1, of the Wisconsin Constitution:

"... the river Mississippi and the navigable waters leading into the Mississippi and St. Lawrence, and the carrying places between the same, shall be common highways and forever free...."

STATUTES
30.01 Definitions
"Piers" and "wharves" are specifically and narrowly defined by statute - they are structures "built or maintained for the purpose of providing a berth for watercraft or for loading or unloading cargo or passengers onto or from watercraft."

30.12(2) Permits for structures
DNR may grant a riparian a permit to place a structure: if the structure does not materially obstruct navigation, or reduce the effective flood flow capacity of a stream, and is not detrimental to the public interest.

30.13(1) Piers that don't require a permit
A riparian proprietor may place a pier without a permit, as long as the pier:
   a. doesn't interfere with public rights
   b. doesn't interfere with rights of other riparians
   c. doesn't extend beyond pierhead line
   d. doesn't violate local ordinances
   e. allows free movement of water, i.e. no formation of land on bed of waterway

30.13(3) Pierhead line
A municipal ordinance that establishes a maximum length for piers

30.131 Piers placed by non-riparians
An exception allowing easement-holders to place a pier, only if they meet a number of specific conditions.

30.133 Conveyance of riparian rights
A riparian cannot convey riparian rights to someone else, other than the right of access across a riparian's land to navigable water.

ADMINISTRATIVE CODE
NR 326, Wisc. Administrative Code - Piers and Boat Shelters in Navigable Waterways

NR 326.04 Pier Standards
   (1) pier can extend to "line of navigation" (=3-foot water depth), or length of boat or necessary draft of boat, 
   (2) or pierhead line
   (3) solid piers allowed in limited cases
(4) pier can't totally enclose a portion of a waterway
(5) piers can't obstruct navigation
(6) piers can't interfere with rights of other riparians
(7) piers can't interrupt free movement of water or cause deposition on the bed
(8) marina requirements
(9) no screen which would trap or accumulate aquatic plants

NR 326.05 Permits required -
A 30.12 permit is required for solid piers, piers on rock-filled cribs, piers going beyond pierhead line, or piers which don't meet NR 326.04 (1) - (9) above.

NR 326.07 Riparian rights determinations
Outlines three methods for identifying the "riparian zone", where each riparian has exclusive right to place structures.

PROGRAM GUIDANCE
The Department technical and legal staff in Madison routinely provide field staff with guidance to help them interpret and apply the statutes, code and law in their work. This Program Guidance is generally issued as internal DNR memoranda, which address specific issues and provide an interpretation of the law.

December 19, 1991 Program Guidance - Riparian Berths and Moorings
This program guidance assists field staff in applying the legal doctrine of "reasonable use" in everyday permit evaluations for piers and similar structures. The guidance contains a formula for identifying the threshold number of boat slips that would generally be considered reasonable - this formula is based on the amount of frontage owned by the riparian. If a riparian's pier complies with this formula, it is likely that they are making a reasonable use of their frontage. If a riparian's existing or proposed use exceeds this formula, we should require a 30.12 permit so we can evaluate if their project will be detrimental to the public interest. This guidance memo also contains information about evaluating marinas, and considering the history of existing facilities. As with all program guidance, it is not a law or code.

CASE LAW
"Public rights" in navigable waters are broadly defined by the Courts in Wisconsin to include fishing, swimming, hunting, enjoyment of scenic beauty, and all rights of navigation. Impacts to the "public interest" in waterways therefore include impacts to fish and wildlife habitat, water quality, natural scenic beauty, navigation, public use and cumulative impacts. Riparian owners have certain privileges, but are limited by the public rights in the waters.

Sterlingworth Condominium Assoc. v. DNR, 205 Wis 2d 702(Ct. App., 1996) Proposed expansion of piers at the Sterlingworth Condominium development, on Mill Lake in Walworth County. The Wisconsin Court of Appeals upheld the Department's limitation of piers to 25 boat slips, rather than 34 as proposed by Sterlingworth. The Court of Appeals discussed the importance of considering the resource values impacted by piers and the boats associated with them, and the cumulative impacts of these structures. The Court of Appeals also affirmed the use of DNR's "pier guidance" in assessing what is a "reasonable use" when developing riparian property.

"In our opinion, the DNR, in limiting Sterlingworth's permit to twenty-five boat slips, carried out its assigned duty as protector of the overall public interest in maintaining one of Wisconsin's most important natural resources.

"The DNR's informal guidelines reconcile the common law 'reasonable use' doctrine with the statutory
limitations on a riparian owner's right to the use of a navigable water. Both presume 'reasonable use' by riparians, but allow for variations based on value and policy considerations.

"Even though the DNR's guidelines do not have the force and effect of law ... and are not controlling on the courts ... the guidelines illustrate DNR's experience and expertise in regulating piers under s. 30.12, Stats. When an agency has particular competence or expertise on an issue, we will sustain its legal conclusions if they are reasonable.... We also accord special deference to the agency's decision if it is intertwined with value and policy determinations....

"[E]very ... right which a riparian owner acquires, as such, to the waters... by his land, is restricted always to that which is a ... reasonable use, and these terms are to be measured and determined by the extent and capacity of the [lake], the uses to which it has been put, and the rights that other riparian owners on the same [lake] also have."

*Nagawicka Bay Sailing Club Owners Assoc. v. DNR.* This case dealt with a backlot development which proposed to place piers for 63 slips in a sensitive bog complex of Lake Nagawicka, Waukesha County. DNR's position at a 10-day administrative hearing was for a simple pier and boardwalk for access to the water. Resource issues included water quality, natural scenic beauty, sensitive area designation of the “kettle”, threatened and endangered species, and motorboat disturbance. The initial hearing included participation of citizens opposed to the project. The Administrative Law Judge affirmed DNR's position, and this was upheld by the Circuit Court and Court of Appeals.

**ADMINISTRATIVE HEARINGS**

*Application of Steven Frisch to Place a Boardwalk and Pier on the Bed of Nagawicka Lake, Waukesha County.* This case involved a parcel of land immediately south of the Nagawicka Bay parcel which was owned by the same developer. The judge ruled in this case that the lake area involved was so fragile that no pier was authorized! This case was appealed, but no judicial decision was ever rendered since the parcels were purchased by a local conservation group, with DNR assistance, to preserve the area.

*Application of Wagner's Port Sand Resort and Campground for a Permit to Place a Marina on the Bed of Big Sand Lake, Burnett County.* This case involved an application and an enforcement action in a case where the campground owner applied to moor 82 boats at six separate pier structures, along 1068 feet of shoreline. The owner had continually expanded the number of boats along his shoreline over a period of years. Many neighbors objected, and 52 neighbors spoke in opposition at the hearing. DNR proposed a maximum of 32 slips (22 seasonal leases and 10 slips for daily use). The judge adopted this recommendation, and also accepted DNR's recommendation that the owner not pull boats onto the shore and store them below the OHWM, due to impacts on near shore vegetation.

**CURRENT ISSUES**

*Dockominiums*

Public water is held in trust by the state. Sale of a "parcel" of public water for use as a boat slip is unlawful. Sale of a condominium unit (residential or otherwise) that includes riparian land and the guaranteed right to place a pier at a designated location is not unlawful, subject to the reasonable use doctrine and protection of public rights.

*Oversized piers/decks over water*

Section 30.01 clearly defines that piers and wharves are structures "built or maintained for the purpose of providing a berth for watercraft or for loading or unloading cargo or passengers onto or from watercraft." Any structure which is built or maintained for any other use - such as a deck or storage area over the water - does not
qualify as a pier or wharf! Oversized piers can create a barrier to public use of that portion of a waterway, and can harm the sensitive shallow aquatic environment which is so important for the fish and wildlife habitat of our lakes and streams. Piers used as decks constitute an encroachment of a private use onto public waters. DNR's 6-foot maximum pier width guideline provides the ability to dock boats, load and unload boats, and it meets ADA specifications. It also tends to limit the ability to use the pier for non-navigational purposes. The six-foot width is not found in statute or code - it comes from DNR's experience and interpretation of statute, code and case law for what structures are allowed in our public waterways.

**Solid Piers**
Solid piers require a permit pursuant to 30.12, and are increasingly common proposals on the Great Lakes shorelines. Cumulative impacts to aesthetics, littoral zone movement and near-shore habitat are some of the major concerns with these structures.
FINDINGS OF FACT, CONCLUSIONS OF LAW AND PERMIT

Pursuant to due notice hearing was held on June 27 and July 11, 1996 at Waukesha, Wisconsin before Jeffrey D. Boldt, Administrative Law Judge (the ALJ). The parties submitted written closing arguments, the last of which was received on August 29, 1996.

In accordance with secs. 227.47 and 227.53(l)(a), Stats., the PARTIES to this proceeding are testified as follows:

Sea View Estates Beach Club, Inc., by

Patrick J. Hudec, Attorney
2100 Church Street
East Troy, WI 53120

Department of Natural Resources, by

Debra Johnson, Attorney
P. O. Box 7921
Madison, WI 53707-7921

Michael and Lauren Zimmerly, by

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Casimir G. Czmierys.
W267N2895 Woodland Road
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N268N2825 Woodland Drive
Pewaukee, WI 53072
FINDINGS OF FACT

1. Sea View Estates Beach Club, Inc. (the applicants or the Club), N27 W26748 Lauderdale, Pewaukee, Wisconsin, 53072 applied to the Department of Natural Resources for a permit to place a pier on the bed of Pewaukee Lake. The proposed project is the placement of a 195 foot long pier accommodating 25 boat slips. The pier has been in place, though not at the proposed size, since the early 1960's. The Department and the applicants have fulfilled all procedural requirements of secs. 30.12 and 30.02, Stats.

2. The applicants own real property located in the NW 1/4 of the NW 1/4 in Section 17, Township 7 North, Range 19 East, Town of Pewaukee, Waukesha County. The above-described property abuts Pewaukee Lake which is navigable in fact at the project site.

The applicants are a group of residents of a subdivision which does not abut Pewaukee Lake. No portion of the subdivision itself affords the applicants with any riparian status. However, the applicants also jointly own the small riparian parcel described above which includes 60 feet of lake frontage. It is ownership of this small parcel that affords the applicants with such riparian rights as they possess.

3. The applicants propose to authorize by permit a pier which has been placed in the water without specific permit authority for many years. There is no question that the proposed pier extends well beyond the line of navigation and therefore requires a permit under department policy and secs. NR 326.04(i) and NR 326.03(3) Wis. Admin. Code. The line of navigation, representing the three foot depth contour, exists at approximately 60 to 68 feet below the ordinary highwater mark. The water depth at the end of the proposed and existing structure is closer to 4.5 to 5 feet. There is no basis in the record for determining that a depth of water greater than 3 feet was required to moor boats at the Sea View pier. Accordingly, a permit was and is required for maintenance of the any pier which extends more that 68 feet into the water.

4. The pier has been placed well beyond the line of navigation for many years without the required permit. Aerial photographs reviewed by the Department indicate that the pier was approximately at or near the line of navigation in 1970. According to the Department, by 1975 it had grown to 110 feet, and by 1995 the pier was fully 199 feet long and moored 17 to 20 slips. (Exhibit 17) There is no factual basis in the record to support the claim of the applicants that the pier was somehow "grandfathered" with respect to the need for a sec. 30.12, Stats. permit. Instead, the record indicates that the large pier has been placed at the site for many years without the required permit.

5. The purpose of the pier is to continue to provide Subdivision residents with boatmooring facilities. The pier also incorporates a near-shore swimming area. No boats are moored along the southwest near-shore area, which is reserved for swimming. The record was clear that some boats could be moored in this area, thereby decreasing the area of public waters occupied by the pier structure. The applicants own by far the smallest piece of riparian property in the area and place by far the biggest pier in public waters of any neighboring properties. (See: Exhibit 8)

6. The Department has established a non-binding Program Guidance (the guidance) to interpret the public interest standard relating to the "reasonable use" of riparian property. (Exhibit 14) The guidance is not applied with the force of law but is used in part to establish a threshold to determine if a riparian has exceeded the "reasonable use" of riparian mooring privileges. This limitation on the use of a given riparian zone is related to
the amount of water frontage owned by the riparian and also to whether the pier structure provides any public benefit in the form of rental slips made available to the public. (Id.) Under the program guidance, the applicants, riparian owners of just 60 feet of lake-front property, would be entitled to just two or three pier slips. The pier provides no benefit to the non-riparian public, as would occur from the operation of a public marina.

The guidance reads as follows with respect to Existing Berthing Facilities:

Existing, berthing facilities which exceed "reasonable use" guidelines may continue to rely on any permit which authorizes specific construction. This remains true unless significantly changed conditions and resulting effects on public rights require permit revision (the Department maintains continuing jurisdiction over such projects). The Department may apply "reasonable use" criteria and require modification or commence an enforcement action against any existing facilities (particularly those undergoing major repair) for which a permit has not been issued if it finds that current statutory requirements have not been met. Generally we will not hold existing facilities to the same "reasonable use" guidelines which we will apply to new proposals since, to some extent, they may have established some limited interest in use of existing facilities. (Exhibit 14, p. 5)

The Department's position in this matter is very hard to reconcile with its policy as articulated in its guidance document. The pier has not been validly permitted. It has never moored as many as 25 boats on public waters. It would be fundamentally unfair to riparians who have obtained the required permit to allow greater privileges to an unpermitted facility, however long it has been placed in public waters. However, given the longstanding placement of the pier, it would also be unfair to restrict the pier to the three slips which the guidance would allow for construction of a new pier.

Balancing the rights of the public with the rights of the private riparians, a pier containing 12 slips and extending no more than 110 feet is at the limits of a reasonable use of this small riparian tract. Even when the pier is so reduced, the Subdivision will continue to place the largest pier in the area on the smallest riparian tract.

7. Several neighboring riparians testified that cramming so many pier slips into the small riparian zone lead to conflicts in and around the site, including safety hazards. (Gutowski, Foch, Zimmerly) There is no question from the record that allowing so many boats to be moored on this small riparian tract has led to incursions into the Zimmerly riparian zone, including specifically areas behind the line of navigation which the common law requires be made available to a riparian. The Zimmerlys have to some extent aggravated these problems by moving their pier closer to the lot line between the two properties. However, this appears to have been motivated by a reasonable desire to protect small children seeking to make use of near shore areas in the face of excessive boat traffic making use of the Club pier. The videotapes offered by the Zimmerlys (Exhibits 25 and 51) well document the congestion at the site and the interference with the use of the Zimmerly riparian zone. Expansion of the existing facility to moor five more boats would plainly violate sec. NR 326.04(6), Wis. Admin. Code. The existing intensive use of the shoreline interferes with the riparian rights of the Zimmerly riparian tract.

8. Waukesha County has adopted an "anti-pyramiding" provision in connection with the Waukesha County Shoreland and Floodplain Protection Ordinance adopted June 25, 1970, and Amended November 14, 1995. (Exhibit)

Section 2.02(54a) of the Ordinance defines "pyramiding" as:

"The act of obtaining or providing access to public bodies of water across private lots or lands in a manner which increases the number of facilities which have access to that water to a degree greater than what would occur with individual riparian owners having individual lots fronting on the water. The effect of pyramiding is to funnel backlot development from offshore lots or residences via a narrow parcel of land to provide access to the water. Publicly owned access points shall not fall within this
Sea View argues that the pier is not subject to regulation because Sea View began placing the pier before the Ordinance was enacted. Section 3.15(l) of the Ordinance provides that:

"The existing lawful use of a building or premises at the time of the enactment of [the Ordinance] or any amendment thereto may be continued although such use does not conform with the provisions of [the Ordinance] for the district in which it is located, subject to conditions hereinafter stated. (Emphasis added.)

While section 3.15 of the Ordinance provides that an existing, nonconforming use of structures and lands can continue, this section also provides, pursuant to sec. 3.15(2)(B)1, that "[n]o such use shall be expanded or enlarged." Sections 3.04a(2), 3.15(l) and 3.15(2)(B)1 were enacted on June 30, 1970. Section 21.07. Therefore, assuming the pier was a legal, nonconforming use pursuant to the Ordinance, Sea View could only maintain the pier in the same size and configuration that existed on June 30, 1970.

The record is unclear as to exactly how large a pier was maintained by Sea View in June of 1970. The aerial photograph reviewed by the Department suggests a modest structure, perhaps 70 feet long in 1970. (Exhibit 17 and 29) However, the applicants presented a family video tape said to show the installation of the pier in the spring of 1970. The pier installed in the videotape is considerably longer than 70 feet, although its exact length is unclear from the record. Club records put the pier length at 230 feet in 1975. What is abundantly clear from the record is that the applicants have never moored 25 boats on the public waters of Pewaukee Lake, as they seek to do in the instant application. According to the Club's own review of its own files, the pier moored no more than 12 boats in 1975. (Exhibit 19) One slip was added over each of the next three years, so that the pier moored no more than 15 boats as late as 1978. (Id.) The subdivision residents have dramatically increased their demands on public waters in terms of the numbers of boats occupying space on public waters since the enactment of the Ordinance. This represents a violation of both the letter and spirit of the anti-pyramiding Ordinance.

9. Approval of the instant permit application seeking 25 pier slips on a pier 199 feet long would be detrimental to the public interest in navigable waters in three distinct ways. First, the pier would be excessive in relation to the amount of riparian frontage owned and would accordingly violate the common law "reasonable use" doctrine. Second, approval of such a congested pier on such a small riparian tract would have a detrimental impact on neighboring riparians and would thus violate sec. NR 326.04(6), Wis. Admin. Code. Third, the Waukesha County anti-pyramiding Ordinance reflects the public interest in navigable waters as adopted by the citizens of the County through their elected public officials. Since 1970, the County has sought to limit exactly the type of development reflected at the site, namely residents of a backlot subdivision owning a small riparian strip and then seeking riparian rights reflecting the size of the subdivision more than the size of the riparian tract they own. To authorize more than 12 slips at the site, which is the best estimate of the number of boats moored at the site upon adoption of the Ordinance, would be detrimental to the purposes of the Ordinance as expressed Section 1.02 of the Ordinance. More fundamentally, the doubling of the number of boats moored at the site at the time of adoption of the Ordinance would be detrimental to the purposes of the public trust doctrine to preserve and protect public waters.

10. The proposed structure will not materially obstruct existing navigation on Pewaukee Lake and will not be detrimental to the public interest upon compliance with the limiting conditions of this permit. The existing longer pier is not a significant material obstruction to navigation, given the usual pattern of boat traffic. (Drake) The project area is in a cove which to some extent mitigates the protrusion into the waterway. Some small craft, including canoes, would be forced farther out into the waters at the 200 foot length. However, taken as a whole, the evidence supports a finding that the existing pier is not a material obstruction to navigation on Pewaukee Lake.
11. The applicants are financially capable of constructing, maintaining, monitoring or removing the structure if it should be found in the public interest to do so.

12. The proposed structure will not reduce the effective flood flow capacity of Pewaukee Lake upon compliance with the conditions in the permit.

13. The proposed structure will not adversely affect water quality nor will it increase water pollution in Pewaukee Lake. The structure will not cause environmental pollution as defined in sec. 144.01(3), Stats., if the structure is built and maintained in accordance with this permit.

14. The Department of Natural Resources has complied with the procedural requirements of sec. 1.11, Stats., and Chapter NR 150, Wis. Admin. Code, regarding assessment of environmental impact.

CONCLUSIONS OF LAW

1. The applicants are riparian owners within the meaning of sec. 30.12, Stats.

2. The proposed facilities described in the Findings of Fact constitutes a structure within the meaning of sec. 30.12, Stats.

3. The Division of Hearings and Appeals has authority under secs. 30.12 and 227.43(1)(b), Stats., and in accordance with the foregoing Findings of Fact, to issue a permit for the construction and maintenance of said structure subject to the conditions specified.

4. The placement of piers and other structures in waters in not absolute, but is subject to the common law doctrine of "reasonable use". State ex rel. Chain O'Lakes Assoc. v. Moses, 53 Wis. 2d 579, 582, 193 N.W.2d 708 (1972). This limitation on the right to place a pier in public water is related to the extent of water frontage owned by the riparian. Rondesvedt v. Running, 19 Wis. 2d 614, 621, 121 N.W.2d (1963). To allow more than 12 boats to be moored at this site would violate the reasonable use of this small riparian tract.


6. The existing pier and the proposed expansion of the number of boats moored at the site would "interfere with the rights of other riparians" within the meaning of sec. NR 326.04(6), Wis. Admin. Code,

7. The project is a type III action under sec. NR 150.03(8)(f)4, Wis. Admin. Code. Type III actions do not require the preparation of a formal environmental impact assessment.

PERMIT

AND THERE HEREBY DOES ISSUE AND IS GRANTED to the applicants, a permit under sec. 30.12, Stats., for the construction of a structure as described in the foregoing Findings of Fact, subject, however, to the conditions that:

1. The authority herein granted can be amended or rescinded if the structure becomes a material obstruction to navigation or becomes detrimental to the public interest.

2. The permittees shall waive any objection to the free and unlimited inspection of the premises, site or facility at any time by any employee of the DNR for the purpose of investigating the construction, operation and
maintenance of the project.

3. A copy of this permit shall be kept at the site at all times during the construction of the structure.

4. The permit granted herein shall expire three years from the date of this decision, if the structure is not completed before then.

5. The permittees shall obtain any necessary authority needed under local zoning ordinances and from the U.S. Army Corps of Engineers.

6. The permittees shall notify the Water Management Specialist, Marty Johnson, not less than five working days before starting construction and again not more than five days after the project has been completed.

7. Any area disturbed during construction shall be seeded and mulched or riprapped as appropriate to prevent erosion and siltation.

8. No heavy equipment shall be operated in the lake at any time unless written notification is made to the Water Management Specialist, Marty Johnson, at least five working days in advance.

9. The pier length shall not extend more than 110 feet lake-ward of the ordinary highwater mark. No more than 12 boats shall be moored at the pier at any time.

10. Acceptance of this permit shall be deemed acceptance of all conditions herein.

This permit shall not be construed as authority for any work other than that specifically described in the Findings of Fact.

Dated at Madison, Wisconsin on October 29, 1996.

STATE OF WISCONSIN
DIVISION OF HEARINGS AND APPEALS
5005 University Avenue, Suite 201
Madison, Wisconsin 53705
Telephone: (608) 266-7709
FAX: (608) 267-2744

JEFFREY D. BOLDT
ADMINISTRATIVE LAW JUDGE

NOTICE

Set out below is a list of alternative methods available to persons who may desire to obtain review of the attached decision of the Administrative Law Judge. This notice is provided to insure compliance with sec. 227.48, Stats., and sets out the rights of any party to this proceeding to petition for rehearing and administrative or judicial review of an adverse decision.

1. Any party to this proceeding adversely affected by the decision attached hereto has the right within
twenty (20) days after entry of the decision, to petition the secretary of the Department of Natural Resources for review of the decision as provided by Wisconsin Administrative Code NR 2.20. A petition for review under this section is not a prerequisite for judicial review under secs. 227.52 and 227.53, Stats.

2. Any person aggrieved by the attached order may within twenty (20) days after service of such order or decision file with the Department of Natural Resources a written petition for rehearing pursuant to sec. 227.49, Stats. Rehearing may only be granted for those reasons set out in sec. 227.49 (3), Stats. A petition under this section is not a prerequisite for judicial review under secs. 227.52 and 227.53, Stats.

3. Any person aggrieved by the attached decision which adversely affects the substantial interests of such person by action or inaction, affirmative or negative in form is entitled to judicial review by filing a petition therefor in accordance with the provisions of sec. 227.52 and 227.53, Stats. Said petition must be filed within thirty (30) days after service of the agency decision sought to be reviewed. If a rehearing is requested as noted in paragraph (2) above, any party seeking judicial review shall serve and file a petition for review within thirty (30) days after service of the order disposing of the rehearing application or within thirty (30) days after final disposition by operation of law. Since the decision of the Administrative Law Judge in the attached order is by law a decision of the Department of Natural Resources, any petition for judicial review shall name the Department of Natural Resources as the respondent. Persons desiring to file for judicial review are advised to closely examine all provisions of secs. 227.52 and 227.53, Stats., to insure strict compliance with all its requirements.
Issue

Water skiing, including competition and exhibition skiing, is clearly an incident of navigation that can also have varying impacts on public rights in navigable waterways. There are approximately 30 competition/exhibition clubs, statewide. Many of these clubs practice and perform weekly using ski platforms and jumps. In the past, these performance ski platforms and jumps required a Chapter 30 permit. New Legislation (1997 AB 100, ACT 27) allows riparians to place water ski platforms and ski jumps in navigable waters without a permit under limited conditions. Field staff need guidance on how to implement S. 30.135; specifically, how to determine if a ski jump/platform (existing or proposed) requires a permit application, so impacts to the public interest can be evaluated and protected.

Authority

30.135 Regulation of water ski platforms and jumps. (1) WHEN PERMIT REQUIRED. (a) A riparian proprietor may place a water ski platform or water ski jump in a navigable water way without obtaining a permit if all of the follow requirements are met:

1. The platform or jump does not interfere with public rights in navigable waters.
2. The platform or jump does not interfere with rights of other riparian proprietors.
3. The platform or jump is located at a site that ensures adequate water depth and clearance for safe water skiing.

(b) If the department determines that any of the requirements under par. (a) are not met, the riparian owner shall submit a permit application to the department [...].

There have been a number of appellate court decisions which address the relationship between the public rights in a waterway and uses by riparian owners and groups which desire to use surface waters for activities such as water ski performances. The two most pertinent cases are *Sterlingworth v. DNR*, 205 Wis. 2d 702 (Ct. App., 1996) and *State v. Village of Lake Delton*, 93 Wis. 2d 78 (Ct. App., 1978).

Sterlingworth provides a recent summary of three key concepts -- reasonable use, cumulative impact, and the role of agency guidance. The Court stated:

“[E]very ...right which a riparian owner acquires, as such to the waters, by his land, is restricted always to that which is a reasonable use, and these terms are to be measured and determined by the extent and capacity of the [lake], the uses to which it has been put, and the rights that other riparian owners on the same [lake] also have.”

Whether it is one, nine, or ninety boat slips, each slip allows one more boat which inevitably
risks further damage to the environment and impairs the public’s interest in the lakes. [...] For this very reason, the consideration of “cumulative impact” must be taken into account.”

“Even though the DNR’s guidelines do not have the force and effect of law... and are not controlling on the courts... the guidelines illustrate DNR’s experience and expertise in regulating piers under s.30.12, Stats. When an agency has particular competence or expertise on an issue, we will sustain its legal conclusions if they are reasonable... We will also accord special deference to the agency’s decision if it is intertwined with value and policy determinations...”

The impacts as discussed in Sterlingworth must be balanced in view of Court of Appeals decision in Village of Lake Delton, where the court reviewed a local ordinance authorizing use of surface water by a water ski show and a challenge of such use by individuals who desired to exercise their public right to fish at the same time as the show was scheduled. The Court stated:

“In our view a regulation [here, the local ordinance authorizing the show] which apportions the use of a given space of water to the single use and user which the space can reasonably accommodate at a single time reflects the obvious law of physics that two objects cannot be in the same place at the same time. While from one perspective such a regulation confers a temporary privilege on the user, from another it merely provides a mechanism through which the user may exercise his right, held in common with all citizens, to use public property for a legitimate purpose. The issue in any event does not turn upon the elusive and semantical distinction between “rights” and “privileges.” For the appropriate questions, as the Supreme court has made clear in the cases previously discussed, are whether the regulation has a legitimate public purpose and, if so, whether the means it employs to accomplish the purpose are reasonable. Under the circumstances of this case, we conclude that both questions must be answered in the affirmative.”

Rationale
Water skiing, including recreational and exhibition skiing, is clearly an incident of navigation and can provide public benefit. Ski jumps/platforms (like other navigational structures) and their use can: impact fish and wildlife habitat; resuspend sediment causing water quality impacts; affect natural scenic beauty; negatively affect other navigation; and affect other riparians. Statute and common law indicate intent to balance these rights.

GUIDANCE FOR EXISTING WATER SKI STRUCTURES

An existing jump or platform with a permit
Existing water ski jumps or platforms which exceed the thresholds in the guidance may continue to rely on any permit under chapter 30, Wis. Stats., that authorized their construction. If a complaint is received about an existing structure, the site should be reviewed to see if permit conditions are met and if physical or ecological conditions have changed. If conditions have changed so that continued placement of the structure results in a new public interest impact, work with the permittee and complainant to amend the permit to include conditions to address the public interest impact. In rare circumstances a hearing could be scheduled to determine if a public interest impact exists that would require revocation of the permit. The significance of the impact should be balanced with the equity of long term placement of the structure. If permit conditions are met and no change has occurred - or if review determines that a permit would no longer be required for the structures - report findings and conclusion (that no further action is required) to the complainant and the permittee.

A proposed change to a permitted jump or platform
Apply the following guidance to see if as a result of the modification a permit is needed. If a permit is needed, the rule would be applied to establish the contents of the public notice and to assess whether any resulting objections are substantive. Review the site to assess existing public interest functions in the waterway at the site.
and to determine whether impacts to the public interest would occur as a result of the modification (including review of any written objections) in order to grant the permit or refer it for a hearing.

**An existing jump or platform without a permit**
The rule or the following guidance would be applied if a complaint is received to see if a permit is needed. If a permit is needed, the rule would be applied to establish the contents of the public notice and to assess any resulting objections. Review the site to assess existing public interest functions in the waterway at the site and to determine whether impacts to the public interest would occur as a result of the modification (including review of any written objections) in order to grant the permit or refer it for a hearing. If no permit is needed, report findings and conclusion (that no further action is required) to the complainant and the party placing the structure.

**A new jump or platform**
Apply the following guidance to determine if a permit is needed. If a permit is needed, the rule would be applied to establish the contents of the public notice and to assess whether any resulting objections are substantive. Review the site to assess existing public interest functions in the waterway at the site and to determine whether impacts to the public interest would occur as a result of the modification (including review of any written objections) in order to grant the permit or refer it for a hearing.

This guidance section helps guide decisions of when we would require a permit application. The determination is intended to be rapid - NOT a complete analysis to answer whether a permit will be issued. Factors will be similar, but permit decisions will rely on more rigorous information, examination, and analysis to ensure recognition of all rights, public and private. Specifically, this guidance identifies criteria or conditions upon which: 1) the platform or jump may interfere with public rights in navigable water; 2) may interfere with rights of other riparians; and 3) is a site that does not ensure adequate water depth and clearance for safe skiing.

Water ski platforms and jumps can be placed without a permit if all of the following five conditions are met: 1) They are not an impediment to navigation or its incidents; 2) They do not impact habitat, cause or increase shore erosion, degrade water quality, or disturb fish and wildlife; 3) They do not harm natural scenic beauty; 4) They do not have significant, cumulative impacts; and 5) They do not interfere with the rights of other riparians.

The remainder of guidance details the factors to be considered and when impacts are likely. These factors are detailed in the form of a questions. The primary questions (in bold) are intended to help staff make rapid determinations using readily available information. A "Yes" answer to any one of the "bolded" questions (primary factors) will require a permit application. The "secondary" questions we've provided can also help you determine the need for a permit application, but are not required.

### Public Interest and Riparian Rights in Navigable Water:
**Determination of Potential Interference**

1) **Impacts on navigation and incidents of navigation**

   Will use of the structure create safety problems? **Is the site within 100 feet of a marked swimming area, public boat landing, dock, anchored raft, pier, or buoy restricted area?** *(Ch. 70-26)* ss. 30.66 and 30.69 forbid water skiing within 100 feet of an anchored occupied boat, marked swimming area, public boat landing, dock, raft, pier or buoy restricted area.

   Does the structure materially obstruct navigation? **Is the size, color, shape, and lighting of the ski jump detrimental to safe day and night-time navigation** *(Ch. 70-26)*?

   **Does the size of the ski platform exceed the Department’s reasonable use guideline of (to be determined after further consultation with WWSF)* (Ch. 75, 4/4/94 Memo--Piers Utilized for Ski
Shows)?

Are there significant conflicts (at the site or lake-wide) with other recreational users of the waterway? Where the initial review indicates that permit conditions (e.g. hours of operation, public access to the platform when not in use if on public land, etc) will avoid or minimize public interest impacts, then a application should be required so that permit conditions can be established and applied. Quality recreational experiences are most often obtained by "not managing for all boating experiences in one ecosystem " but by diversifying recreational settings. Many recreational users of certain waters have come to expect a recreational experience in quiet and less disturbed lake or river. Likewise, certain waters (or areas) are typified by more active recreational activities.

2) Impacts on Littoral Zone Habitat, Flora, and Fauna -- Boating can have negative impacts in shallow areas, specifically sediment and nutrient re-suspension, decreased water clarity, shoreline erosion, physical disturbance of fish and wildlife, and loss of aquatic plants. Permit applications will be required where structures and their associated activities are located in areas that: 1) are susceptible to sediment resuspension; 2) contain extensive rooted aquatic plant beds; 3) are inhabited by threatened or endangered species; 4) are designated as a sensitive area; 5) are spawning or nursery habitats.

Is the pull zone adjacent to the starting platform located in water depths less than 7-8 feet and where the dominant substrate (upper 2 inches) is composed primarily fine sediments (grain size less than sand)? This question does not apply to riverine settings where substrates are composed of sand or larger grain sizes (cobble, gravel, etc). For standing waters (lake, flowages, and backwater areas), factors such as depth and substrate will be considered. Fine sediments, composed mostly of silts, clays, or loose organic material are more easily resuspended than sands, gravel, or cobble substrates. Propellers from outboard engines create turbulence and wake that can impinge upon bottom sediments at depths down to ten feet. The extent of disturbance depends upon propeller size, speed of operation, draft of the boat, and sediment characteristics.

Does the pull zone adjacent to the starting platform (to be defined by WWSF) have more than 25% of its area covered by rooted aquatic plant growth? Motor boats reduce plant growth primarily through scouring of the sediment substrate and direct cutting. Motorboat exclosure experiments conducted by DNR researchers have found roughly three times the plant biomass in motorboat-excluded plots compared to plant biomass in plots exposed to motorboat activity.

Does existing survey information indicate that threatened or endangered species are found near the site?

Is the structure and its associated activity located in or near spawning/nursery habitats or designated sensitive areas?

Is the structure located in an area where exotic plants which spread by fragmentation of leaves and shoots exist (i.e. eurasian water milfoil)? Direct damage of plant shoots from propeller scour and cutting can facilitate the spread of milfoil to new sites.

Will the increased boating activity associated with the structure result in a significant direct disturbance to fish or wildlife?

3) Impacts on Natural Scenic Beauty

Is development near the site less than the NR326 standard? or Are agreements with local units of government absent (city and county park areas)? (Developed shorelines are those where there are at
least five principal structures including at least one on the applicants property which are located within 500 feet of the proposed shelter site and are visually intrusive as viewed from the water, NR326.055(4)(f)]. Less developed areas of the lake or less developed lakes in general will experience greater impacts on natural scenic beauty from the structure and it's activity than other more developed areas or lakes.

Will the structure and the increased associated boating significantly lower natural scenic beauty near the area or lake-wide? Consider compatibility--the relationship between the structure, it's associated activity and the other adjacent land/water uses. Is this activity appropriate for this setting? Consider the Impact of additional structures on the natural beauty of areas that have already experienced some degree of development.

4) Cumulative impacts--Cumulative impacts of increased power boating can result in lake-wide changes. These criteria can be used to assess the significance of the structure (and associated activity) to cumulative lake impact. Water chemistry, lake morphometry, and lake size (or areas of lakes) are sufficient evidence for potential lake-wide impacts and may justify the need for a permit application. Sponsor, events, and use of the structure are additional factors that help determine the potential for cumulative impact of similar decisions.

What is the depth and size of the waterbody? Is the lake <1,000 acres and more than 80% of its surface area shallower than 10 feet in depth (or mean depth of the lake 12 ft.)? OR For lakes 500-1,000 acres is more than 50% of its surface area under 10 feet deep. Impacts of motor boats are most prevalent in small shallow lakes, or shallow areas of deep lakes.

What are the water chemistry and sediment conditions? Boats have the potential to stimulate algal growth in lakes with soft-water and easily suspended sediments. Decreased water clarity can negatively impact lakes in many ways. Aside from the decreased enjoyment by lake users, reduced water clarity can limit the light available to submersed aquatic plants and upset the food web dynamics in lakes by affecting behavior or reproductive success of invertebrates, fish, and waterfowl. Numerous studies have documented increased turbidity or suspended solids directly related to motorboat activity. Impacts of motor boats will be greatest on small, shallow lakes with soft-water sediments (high clay, low calcium).

What is the nutrient condition of the waterbody? Consider the nutrient gradient, particularly for shallow lakes. The nutrient gradient represents a continuum of nutrient input rates. The possibility of rapid transition between alternative states of habitat (macrophyte- or phytoplankton dominance) occurs through the middle of the gradient. At low nutrient input rates, levels are not sufficient to support extensive macrophyte growth. At high nutrient input rates, extreme algal turbidity prevents development of submersed macrophytes. Submersed macrophytes attain their greatest importance through the middle of the nutrient loading gradient. Over time, water quality may suffer as sediment disturbance and plant bed destruction increase nutrient inputs to the lake and fuel algal growth. At sufficient levels, lake-wide impacts can occur; a shallow lake can abruptly shift from macrophyte dominance to algae dominance. Shallow lakes with moderate-high nutrient conditions are most vulnerable to lake-wide habitat changes (alternative stable states).

Does the structure and its associated use provide only private benefits (not a recognized competition/exhibition ski organization)? While examination of public benefits (or lack of) associated with the structure in of itself is not test of interference with the public interest, analysis of cumulative impact of "non-club/individual riparians" indicates interference with the public interest. Factors such as projected frequency of use, audience size, club affiliation (e.g. Wisconsin Water Ski Federation, National Ski Show Association, American Water Ski Association) shall be considered when determining if benefit is significant. Are viewing events associated with the structure accessible to only private individuals or unreasonable fees charged?
Is the structure being utilized as a "private deck" when ski shows are not occurring? Indicators include furniture, angling equipment, enclosing railings.

5) Impacts on Other Riparians

Are the structures located outside the "applicant's" riparian zone of influence? Or are riparian approvals (signatures) adjacent to the defined performance area (to be defined in consultation with WWSF) absent? Neighbor sign-off in for a described boat traffic pattern within 200' of the shore.

Are there specific objections from neighbors that detail how the ski jump/performance platform, and associated uses interfere (ie. hours of operation, etc.) with other riparians? (Depending on the above criteria we may be able to eliminate this question.)

Will increased boating activity in the area associated with the structure result in significant shoreline erosion above the ordinary high water mark? Consider site location, lake size, lake orientation, fetch distance, etc.

In summary, water ski jumps and platforms may be placed without a permit when multiple conditions relevant to navigation, features of the littoral zone (and its flora and fauna), natural scenic beauty, considerations of cumulative impact, and considerations of other riparians are all met. A summary of those conditions are as follows: 1) The site is a safe distance from swimming area, boat landings, docks, rafts, piers, or buoy restricted area; 2) the structure allows for safe navigation (size, lighting, marking); 3) for lakes the structure is located in an areas that are capable of supporting intense boating (> 7-8 feet with sand or larger predominate substrates); 4) the structure is not in or adjacent to sensitive areas or spawning and nursery areas; 5) the structure is located adjacent to developed shorelines, or along areas where agreements with local municipalities exist; 6) the structure is not located on smaller shallow lakes (< 1,000 acres and mean depth <12 feet); 7) the structure provides for public benefit; 8) the structure is not utilized as a private deck; and 8) the structure is within the applicants riparian zone of influence. Field Staff will use the attached water ski jump/platform analysis checklist to assist interested parties to determine whether a permit application is required.

Related Guidance: Piers Utilized for Water Ski Shows-4/4/95
Handbook CH. 70-26, Water Ski Jumps

Attachment: Water Ski Jump/Platform Analysis Checklist

Drafted by: Paul Cunningham, FH/4 Mary Ellen Vollbrecht, FH/6
Reviewed by: Mike Cain, LC/5
Water Ski Jump/Platform Analysis Checklist will guide decisions when the Department would require a permit application for a proposed or existing structure. This checklist is not intended to be a complete analysis to answer whether a permit will be issued. A “Yes” answer to any one of the primary factors will require a permit application. The secondary factors can also help evaluate the need for a permit application, but are not required.

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<tr>
<th>CATEGORY</th>
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<tr>
<td>Navigation</td>
<td>Is the site within 100 feet of a marked swimming area, public boat landing, dock, anchored raft, pier, or buoy restricted area? (Chi. 70-26)</td>
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<td>Is the size, color, shape, and lighting of the structure detrimental to safe day and night-time navigation (Ch. 70-26)?</td>
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<td>Does the size of the ski platform exceed the Department’s reasonable use guideline (20’X36’)?</td>
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<td>Littoral Zone Habitat, Flora, and Fauna</td>
<td>Is the pull zone located in &lt;7-8 ft and the dominant substrate (upper 2”) composed of fine sediments (&lt;sand size)? This question does not apply to riverine settings where the bottom is composed of substrates of sand or larger grain sizes (gravel, cobble).</td>
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Comments on the proposed/existing Water Ski Jump/Platform.
FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

Don Anderson, 5856 Easy Street, Waunakee, Wisconsin, 53597, filed an amended application on July 9, 2001 with the Department of Natural Resources for a permit to place four piers on the bed of Lake Wisconsin. The proposed piers are from 68 to 72 feet long and would accommodate up to 88 slips. The proposed project is located in the SW ¼, SW ¼, Section 8, Township 10 North, Range 8 East, Town of Lodi, Columbia County, Wisconsin.

On June 7, 1999, the Department of Natural Resources denied a previous permit application. The Division of Hearings and Appeals received a Request for Hearing from the Department on October 27, 2000. A hearing date was set and then adjourned to allow the applicant time to revise his plan. A revised plan was submitted on July 9, 2001.

Pursuant to due notice hearing was held on September 26 and 27, 2001, at Lodi, Wisconsin, Jeffrey D. Boldt, administrative law judge (the ALJ) presiding. The parties requested an opportunity to submit written closing arguments and the last was received on October 9, 2001.

In accordance with Wis. Stat. §§ 227.47 and 227.53(1)(c), the PARTIES to this proceeding are certified as follows:

Don Anderson, by

Attorney Rhea A. Myers
AnchorBank Building
25 West Main Street, Suite 801
Madison, WI 53703
FINDINGS OF FACT

1. Don Anderson, 5856 Easy Street, Waunakee, Wisconsin, 53597, filed an amended application on July 6, 2001 with the Department of Natural Resources (DNR) for a permit to place four piers on the bed of Lake Wisconsin. The proposed piers are from 68 to 72 feet long and would accommodate up to 88 slips.

2. The applicant owns riparian property located in the SW 1/4, SW 1/4, section 8, Township 10 North, Range 8 East, Town of Lodi, Columbia County, Wisconsin.

3. The applicant proposes to construct a marina at the above-described site that would accommodate 88 boats. The applicant owns a three-acre, triangle-shaped, parcel which consists mostly of wetlands. The parcel also includes a 25-foot wide strip (also consisting mostly of
wetlands) that runs south along a railroad corridor. The parcel abuts Lake Wisconsin in the Town of Lodi. Nearly the entire stretch of riparian frontage except the extreme north end consists of wetlands. The upland area is proximate to an existing bar/restaurant which is not part of the applicant’s property. Approximately 1500 feet of frontage is proximate to Lake Wisconsin, although the record is unclear as to how much of this is “riparian property” due to erosion along the bank. The upland property at the site totals approximately .72 acres. This consists of .58 acres on parcel A and .14 acres along the railroad corridor. (Ex. 32)

4. The proposal seeks to concentrate the pier slips in a single area, close to the developed area next to an existing bar/restaurant. The neighboring bar for many years supported a local water-ski show and habitat in that area is considerably degraded. Most of the Anderson parcel includes high-quality wetland habitat. The pier complex would extend approximately 360 feet laterally along the shore. The piers would extend up to 180 feet from the current water-shore line, and up to 210 feet below the ordinary highwater mark. (OHWM) No boats would be moored in the first approximately 50 feet below the existing water line, which is at or about the three feet water-depth. Instead, the four piers would be attached to a T-shaped frame in an effort to allow light penetration in the first fifty feet of the near shore area. There would be one 72-foot long pier, one 70-foot long pier and two 68-foot long piers. Each pier would moor approximately 22 boats. The piers extend well into the waters of the bay, to the 74-inch water depth. No jet skis would be allowed at the marina. Instead, the applicant expects to moor primarily pontoon boats.

5. The total footprint of the marina complex would occupy nearly 2 acres of the public waters of Lake Wisconsin. This is an area which would be largely denied to the public to fish, boat or otherwise make use of public waters. The applicant would allow public fishing from piers and would provide some public benefit by providing mooring opportunities. However, any public benefit is limited in this case because the lake already exceeds maximum public access criteria as set forth in Wis. Admin. Code NR 1.91(5). (Larson) DNR Fisheries Biologist Tim Larson testified that the public boat access criteria are not binding on the instant private marina permit application. However, the administrative code presumes that, when maximum public boating access numbers are exceeded, provision of further access “materially impairs navigation and is detrimental to the public interest.” (Id.) Accordingly, the instant private marina does not provide a significant public benefit by providing mooring slips to the public.

6. The proposed piers would materially obstruct navigation in Okee Bay. DNR Warden Steven Schlimgen testified that the proposed piers would extend much farther out into the bay than other piers in the area and would pose a safety hazard, both during boating season and in the winter. There is substantial boating activity within Okee Bay, including water skiing and recreational boating by large fast boats. (Schlimgen; Exs. 18, 66) The proposed piers would extend 130 feet farther out in the waters of the bay than the currently existing piers. (Id.) Schlimgen was persuasive that any piers extending more than 100 feet from the existing shoreline would pose a hazard or unduly restrict boating in the bay.

7. There is aquatic vegetation in the areas in and around the proposed pier. The DNR conducted a field investigation in July, 2000, and found abundant sago and curly leaf pondweed, as well as seven other aquatic plant species that provide significant habitat value to fish and
waterfowl. (Ex. 14) The applicant’s experts conducted field investigations much later in the season, and found much more sparse aquatic vegetation. Ms. Thompson sampled transects on September 20, 2001. (Ex. 7) Mr. Miller on September 21, 2001. However, such variability is not unexpected, especially given the life cycle of sago pondweed. (Sessing) The DNR was persuasive that the roughly two acre foot print of the proposed piers would have an adverse impact on the rich aquatic plant community and associated invertebrates due to shading by the large piers. (Larson, Marshall, Sessing) Further, the boat traffic related to use of the marina, even if mostly pontoon boats, would have a detrimental impact upon aquatic plants by cutting plants and increasing water turbidity. (Id.) Pontoon boats will have a greater tendency to shade out aquatic plants.

The applicant has not carried his burden of proof in demonstrating that there will not be detrimental impacts to aquatic plant communities.

8. The parcel is at the edge of a DNR designated “sensitive area” but is not included on the final sensitive area map. (Ex. 63) DNR Water Resources Specialist Mark Sessing testified that the Anderson parcel was left off the 1992 map by error, and that the parcel will be included on future maps. (Ex. 61) The sensitive area determination primarily relates to restrictions on use of chemicals on aquatic plants. However, there is no question that both the wetland vegetation above the OHWM and the lakebed aquatic plant communities in the area where the proposed piers would be placed provide a rich habitat for wildlife and fish. Sago and long leaf pondweed, and white water lily all provide waterfowl food and fish food and cover. (Ex. 14) The “marcophyte population of the Okee Bay” area has been identified as an “outstanding feature” of Lake Wisconsin in connection with Federal Energy Regulatory Commission (FERC) licensing matters. (Ex. 20) In the 1980’s, well prior to Mr. Anderson’s purchase of the property, the DNR considered developing the Anderson parcel as a public access site boat launch site. The DNR determined that the site was not appropriate for development because of potential impacts to wetlands. (Larson; Ex. 72) The record supports treating the Anderson parcel as contiguous to a unique and “sensitive area” of Lake Wisconsin.

9. The DNR has issued a guidance document relating to marinas and similar mooring facilities. (Ex. 2) The guidance provides that the reasonable use of a riparian parcel has a direct relationship with the amount of riparian frontage owned. The guidance provides that a threshold calculation allows for two berths for the first 50 feet of frontage and one for each additional feet of shoreline in common ownership.

The total expanse of this parcel is 1500 feet, although parts of the 25-foot strip have been subject to erosion and there may no longer be any riparian property above the ordinary high-water mark in those areas. Further, the fact that so much of the parcel is high quality wetland must be taken into account when considering the reasonable use of this parcel. (Biersach) Finally, the aquatic habitat is unusually rich in much of the near shore area of the Anderson parcel. This argues for a lesser number than the “threshold” reasonable use calculation of 30 or 31 slips. The DNR Aquatic Habitat Expert Pam Biersach, presented testimony that the reasonable use of the 1,500 feet of frontage would be one pier and two slips based on her belief that the 1,500 feet of frontage was part of only five- percent sensitive area left in the lake. Ms. Biersach’s testimony assumed that this wetland parcel should be considered a “sensitive area” of...
The applicant offered testimony that marinas are afforded more than the basic calculation because they provide public access. (Ex. 2) This is, as general statement, true. However, in this case there was testimony that the lake already exceeds maximum public access criteria. (Larson) Accordingly, the value of increased public access is very limited. Further, the proposal has significant impacts to other public rights in navigable waters identified in the Marina Guidance cited by the applicant. (Ex. 2)

Balancing all of these factors, the reasonable use of this parcel would be seven or eight boat slips. Because there is no proposal before the Division limited to this number of slips, it would not be appropriate to issue such a permit in connection with the Order set forth below. However, the record would support issuance of a permit for eight slips and one pier if a proposal addresses the following unresolved issues:

a. Placement of one pier and no more than 8 slips within 100 feet of the OHWM;

b. Provision for a stormwater retention pond with an appropriate buffer from wetland areas;

c. Placement of a parking lot to accommodate 4 cars on an upland portion of the parcel;

d. Compliance with county parking lot size requirements;

e. Access to the pier shall be from an upland portion of the parcel or by a boardwalk over wetlands at the north end of the parcel if there is not sufficient available upland.

10. The proposed project would have detrimental impacts on wetland functional values. The applicant proposes a boardwalk roughly at the center of parcel A. (Exs. 4 and 32) The applicant’s own wetland expert, Alice Thompson, opined that she would prefer to see the boardwalk closer to the upland area at the northern property line to limit impacts to wetlands. The applicant proposes a parking lot large enough to serve 44 cars, or half of available boat slips. (Anderson) There is likely to be a significant detrimental impact to wetland vegetation as a result of runoff from either a paved or gravel parking lot. (Trochell) A stormwater retention pond would likely mitigate direct impacts to wetlands. (Thompson, Trochell) However, given the small amount of available upland, it would be difficult to locate both the parking lot and a pond on the site. (Trochell) There are practicable alternatives available which would have less impact on wetlands, including developing the lot for a residence. (Trochell)

11. The proposed large marina complex would have detrimental direct and cumulative impacts on maintaining fishery values in Okee Bay. (Larson) DNR Fisheries Biologist Tim Larson provided largely unrebutted testimony describing in great detail negative impacts to fishery associated with large pier structures placed in good quality fish habitat. (See: Exs. 75-
Further, the DNR twice sampled fish populations in the immediate area of the proposed piers. On July 7, 2000, the DNR identified nine fish species in the waters at the site. The DNR also found a Special Concern fish, the pugnose minnow, when surveying in June of 1999. Developing this site would undermine fisheries reproduction, nursery habitat and overall fish production in a lake with limited littoral zone habitat due to cumulative effects of development elsewhere on the lake and poor light penetration for aquatic plants. (Larson, Marshall; Ex. 14)

While fish can be attracted to shaded areas associated with piers, this fact is misleading for at least two reasons. First, the same shading which attracts adult fish may inhibit plant growth necessary for both spawning (Ex. 83) and cover and nursery for immature fish. Further, Larson testified that recent studies have concluded that developed areas that include large pier structures have been associated with a significant decline in fish species diversity. (Ex. 76) The scientific literature also indicates that environmental impacts to fish populations associated with pier construction are particularly detrimental when placed in “sensitive” habitat areas. (Ex. 85)

The applicant has not carried his burden of proof in demonstrating that the proposed project will not have a detrimental impact upon the public interest in maintaining fishery values.

12. The area of Okee Bay that includes the Anderson parcel provides significant habitat to a wide variety of reptiles and amphibians, quadrupeds, waterfowl and migratory birds. (Kaiser; Exs. 23 and 54) The 360-foot length of the pier to some extent creates a structural barrier that deters use by wild mallards and other migratory waterfowl. (Kaiser; Ex. 54) Kaiser opined that the marina project would likely result in a decrease use by waterfowl of the area including the proposed marina. (Id.) Direct impacts to wildlife would be relatively minimal. (Miller; Kaiser) However, the cumulative impact of destroying remaining good quality wildlife habitat on Lake Wisconsin is significant. (Kaiser) The direct impacts to wildlife are not sufficient in themselves to result in denial of the permit. However, the applicant has not carried his burden of proving that there would not be cumulative impacts to wildlife due to the loss of two acres of wildlife habitat.

13. The proposed marina project would have some detrimental impact on natural scenic beauty. There is no question the four large piers would detract from the natural beauty of the area. However, this is not in itself a sufficient basis to deny the permit application. The area immediately next to the area of the proposed piers has been used as a commercial property for many years and supported the water-ski show. The applicant has made an effort to concentrate the proposed piers in the two acres near this area of the shoreline.

14. The testimony of Town of Lodi Chairperson Charlaine Brereton, indicates that the size of parking lot proposed by the applicant is insufficient to meet the size requirements of county ordinances relative to parking facilities. (See Ex. 87) This further exacerbates the problems outlined above relative to the small amount of upland available for all of these marina-related facilities.

15. The applicant is financially capable of constructing, maintaining, monitoring or removing the structures if it should be found in the public interest to do so.
16. The existing structures will not reduce the effective flood flow capacity of Lake Wisconsin.

17. The proposed structures will adversely affect water quality but will not significantly increase water pollution in Lake Wisconsin. The structure will cause some minimal environmental pollution as defined in Wis. Stat. § 218.01(10). The increased boat traffic associated with the mooring of 88 boats is likely to increase turbidity by raising sediments from the lake bottom. (Marshall; Ex. 54) However, impacts to water quality are not a sufficient basis in themselves to result in denial of the permit.

18. The Department of Natural Resources has complied with the procedural requirements of Wis. Stat. § 1.11 and Wis. Admin. Code chapter NR 150 regarding assessment of environmental impact.

DISCUSSION

The applicant owns and operates another marina on Lake Wisconsin, Moon Valley. He believes there is a demand for pier slips in the Okee Bay area in the Town of Lodi, because access there is more convenient for boaters from Dane County. Based upon the record at hearing, there is every reason to believe Mr. Anderson is capable of operating a marina in an efficient and environmentally responsible manner. However, this primarily wetland parcel is not adequate to allow for a project on the scale that Mr. Anderson believes is necessary to be financially viable. Anderson testified that anything less than 60 slips would not make financial sense. At best, this parcel could support a “mini-marina” of 7 or 8 slips, especially given the county ordinance relating to size requirements for parking lots, (Ex. 87) and the need for stormwater retention pond as the applicant’s own wetland expert conceded would be required. (Thompson)

The proposed project is far too large for this wetland dominated riparian parcel. There was no showing by a greater weight of the credible evidence of exactly how much riparian frontage the applicant owns. Much of the parcel consists of a 25 foot buffer strip between a rail corridor and the lake. Significant erosion has occurred in some areas, leaving a serious question of whether all of the property remains “riparian.” The “reasonable use” of a riparian parcel is based in part on the environmental “value” of the subject parcel. Sterlingworth v. DNR, 205 Wis. 2d 702, 732, 556 N.W.2d 791 (Wis. Ct. App. 1996) The proposed project area constitutes an important community of aquatic plants and provides significant fish and wildlife habitat. Further, the reasonable use calculation is not a strict mathematical formula. Wetland parcels have limited uses and greater habitat value, and should be viewed differently than upland parcels.

More fundamentally, only five percent of high-quality aquatic vegetation and habitat remain on Lake Wisconsin. Much of what is left is in Okee Bay. The fundamental objection of the DNR to this dockage proposal is the potential effect on aquatic plant life as well as secondary impacts on wetland functional values. There is no question that a project on this scale would have significant adverse impacts upon both lakebed weed banks and wetland functional values. (Biersach, Sessing, et al) The applicant did not submit a “practicable alternatives” analysis, as
would be required to find the project in compliance with water quality standards for wetlands found in Wis. Admin. Code NR 103. In fairness, the DNR did not ask him to present one. This rich and beautiful area of Okee Bay provides outstanding habitat to fish and wildlife. Such areas are rare on Lake Wisconsin, and the DNR appropriately has sought to “preserve and protect” it. See: Sterlingworth, p. 722 Placement of piers in the area should be limited as set forth above, and only if and when the conditions described herein are met.

CONCLUSIONS OF LAW

1. The Division of Hearings and Appeals has authority under Wis. Stat. §§ 30.12 and 227.43(1)(b) and in accordance with the foregoing Findings of Fact, to issue or deny a permit for placement of structures on navigable waters.

2. The piers described in the Findings of Fact constitute structures within the meaning of Wis. Stat. § 30.12.

3. The applicant is a riparian owner within the meaning of Wis. Stat. § 30.12. The applicant has not carried his burden of proving the exact amount of riparian frontage owned.

4. The applicant for a Wis. Stat. § ch. 30 permit has the burden of proof that the project will meet the standards in Wis. Stat. § 30.12(2), Village of Menomonee Falls v. DNR, 140 Wis. 2d 579, 605, 412 N.W.2d 505 (Wis. Ct. App. 1987). The applicant has not carried his burden of showing that the proposed project would not be detrimental to the public interest in navigable waters.

5. The placement of four large piers totaling 88 pier slips in this area would not be a “reasonable use” of this wetland-dominated riparian parcel. Sterlingworth, at p. 718. Placement of one pier less than 100 feet in total length and mooring no more than eight slips would be the maximum “reasonable use” of this riparian property.

6. The DNR and the Division must consider the cumulative impacts of permitting structures under Wis. Stat. § ch. 30. Hixon v. Public Service Commission, 22 Wis. 2d 608, 619, 146 N.W.2d 577 (1966) and Sterlingworth v. DNR, 205 Wis. 2d 710, 556 N.W.2d 791, (Wis. Ct. App. 1996) There would be detrimental cumulative impacts from placing numerous piers in areas which provides significant aquatic habitat.

7. The applicant has not carried his burden of proof in showing that the proposed project would not be “detrimental to the public interest in navigable waters” within the meaning of Wis. Stat. § 30.12(2).

8. The public trust doctrine protects the public interest in navigable waters, including the interest in maintaining a high-quality fishery for recreational purposes. Muench v. PSC, 261 Wis. 492, 501-502, 53 N.W.2d 514 (1952). The public trust duty requires the state not only to promote navigation but also to protect and preserve its waters for fishing, recreation and scenic beauty. Just v. Marinette Co., 56 Wis. 2d 7 (1972)
9. The project is a type III action under Wis. Admin. Code § NR 150.03(8)(f)4. Type III actions do not require the preparation of a formal environmental impact assessment.

ORDER

WHEREFORE, the request for a permit to place structures on the bed of Lake Wisconsin is DENIED.

IT IS FURTHER ORDERED, that if the applicant files a request for a permit which meets the conditions set forth in Finding #9 above, limited to one pier and no more than eight slips, the DNR shall issue such a permit without need for a second contested case proceeding.


STATE OF WISCONSIN
DIVISION OF HEARINGS AND APPEALS
5005 University Avenue, Suite 201
Madison, Wisconsin 53705-5400
Telephone: (608) 266-7709
FAX: (608) 264-9885

By

JEFFREY D. BOLDT
ADMINISTRATIVE LAW JUDGE

NOTICE

Set out below is a list of alternative methods available to persons who may desire to obtain review of the attached decision of the Administrative Law Judge. This notice is provided to insure compliance with Wis. Stat. § 227.48 and sets out the rights of any party to this proceeding to petition for rehearing and administrative or judicial review of an adverse decision.

1. Any party to this proceeding adversely affected by the decision attached hereto has the right within twenty (20) days after entry of the decision, to petition the secretary of the Department of Natural Resources for review of the decision as provided by Wisconsin Administrative Code NR 2.20. A petition for review under this section is not a prerequisite for judicial review under Wis. Stat. §§ 227.52 and 227.53.

2. Any person aggrieved by the attached order may within twenty (20) days after service of such order or decision file with the Department of Natural Resources a written petition for rehearing pursuant to Wis. Stat. § 227.49. Rehearing may only be granted for those reasons set out in Wis. Stat. § 227.49(3). A petition under this section is not a prerequisite for judicial review under Wis. Stat. §§ 227.52 and 227.53.

3. Any person aggrieved by the attached decision which adversely affects the substantial interests of such person by action or inaction, affirmative or negative in form is entitled to judicial review by filing a petition therefor in accordance with the provisions of Wis. Stat. §§ 227.52 and 227.53. Said petition must be filed within thirty (30)
days after service of the agency decision sought to be reviewed. If a rehearing is requested as noted in paragraph (2) above, any party seeking judicial review shall serve and file a petition for review within thirty (30) days after service of the order disposing of the rehearing application or within thirty (30) days after final disposition by operation of law. Since the decision of the Administrative Law Judge in the attached order is by law a decision of the Department of Natural Resources, any petition for judicial review shall name the Department of Natural Resources as the respondent. Persons desiring to file for judicial review are advised to closely examine all provisions of Wis. Stat. §§ 227.52 and 227.53, to insure strict compliance with all its requirements.
TO: Water Management Specialists

 Water Management Engineers

 Regional Aquatic Habitat Experts

 Bureau of Fisheries Management and Habitat

 Protection – Rivers and Habitat Protection Section

SUBJECT: Guidance for Reviewing “Dockominium” Projects

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

Summary of Guidance
The purpose of this guidance is to assist staff in interpreting and applying the findings of the recent Wisconsin Supreme Court decision in ABKA Limited Partnership v. Wisconsin Department of Natural Resources, 2002 WI 106. In general, staff should first review the proposal for fundamental habitat and public rights impacts and make a reasonable use determination, then notify the applicant of the determination. Cases of non-residential condominiums involving boat slips should be referred to the FH Bureau for review.

Background
The Wisconsin Supreme Court found that the Abbey Harbor Condominium’s lock box units did not have an independent use as required under state condominium law, and therefore were not valid condominium units. In so deciding, the court noted that the condominium declaration did not state any independent purpose for which the lock box units were intended. The court further stated that a condominium unit "cannot serve primarily as a conduit for another use." Because the lock boxes were not valid condominium units, the court concluded that the Abbey Harbor Condominium’s declaration providing a boat slip as an appurtenance to each unit is an attempt to convey riparian rights in violation of 30.133, Wis. Stats.

The Court went on to state:

We note that residential condominium units that provide for the use of boat slips are readily distinguishable from ABKA’s lock boxes. Residential condominium units are intended for a type of independent use…. Such units would comply with the statutory definition of “unit,” would allow for a valid condominium conveyance, and would create common interest ownership in riparian property. Therefore, residential units that provide for the use of a boat slip would not contravene s. 30.133.

Considerations
Based on the Supreme Court ruling, we can conclude that existing or proposed residential condominiums that provide boat slips for unit owners will generally be a lawful means of conveying riparian rights. Of course they must meet all applicable statute, code and common law requirements, and the number of boat slips must be limited to a reasonable use.
For non-residential condominiums, the Supreme Court recited the following principles:

- The condominium declaration must describe the purpose of the units apart from their appurtenant boat slip.
- To be valid, condominium units must have an independent use and value. For example, condominium form of ownership has been applied to airplane hangars and grain storage bins, which are independent uses.
- The unit must not simply be a conduit for another use, e.g. the use of the boat slip.

For any non-residential condominiums that provide or propose to provide boat slips to unit owners, refer the case to the FH Bureau with a copy of the condominium declaration, application and pertinent information to describe the proposed project. Bureau and Legal staff will review non-residential condominium proposals for compliance with all applicable laws, and advise regional staff how to proceed.

_Drafted by Liesa Nesta_
A. PURPOSE

Regulate the placement and size

A riparian has the right to place a boat shelter in navigable waters. This right is subordinate to the public right of navigation, and the rights of the state as trustee of navigable waters of Wisconsin. The boat shelter statute and administrative rule are designed to develop rules for the construction, location, size, and placement of boat shelters in navigable waters.

B. MECHANISM

A riparian owner may place a seasonal boat shelter which meets applicable statutory and administrative rule standards without a permit. Should these standards not be met or the boat shelter be permanent, a specific permit under s. 30.12(3)(a)6, Wis. Stats, must be applied for. Alternatively, upon a complaint, the Department investigates the complaint and may hold a hearing under s. 30.14.

C. HISTORY

Prior to the spring of 1988, boat shelters were treated as boathouses and were prohibited below the OHWM by s. 30.121(2).
Act 374, Laws of 1987 was created to authorize permanent boat shelters. The law specified that no permanent boat shelter may be constructed after May 3, 1988 if the property includes a boathouse within 75' of the OHWM or a boathouse over the navigable waters adjacent to the owner's property. The statute also allowed the Department to promulgate rules governing boat shelters.

In 1991, NR 326 was amended to include standards for the construction, location, size and placement of a boat shelter.

D. STANDARDS

1. STATUTORY STANDARDS

   a. s. 30.01(1c) - "Boat shelter" means a structure in navigable waters designed and constructed for the purpose of providing cover for a berth place for watercraft, which may have a roof but may not have walls or sides. Such a structure may include a boat hoist.

      A shelter must have a roof or canopy to be treated as a shelter.

      The definition differentiates between a shelter with a roof and a hoist (lift) without one.

      If a boat lift or hoist has a roof or canopy at any time during the year, it must be treated as a shelter.

   b. s. 30.12(3)(a6) – Permanent shelters require a DNR permit. Riparian status is required. After May 3, 1988, permanent shelters are prohibited on properties where there is a boathouse within 75 ft. of the OHWM or over the water.

2. MUNICIPAL AUTHORITY

   s. 30.12(3)(c) - A town, village, city or county may enact ordinances at least as restrictive as the authorizing statute and rules "regulating architectural and aesthetic features" of shelters. They may prohibit them but should justify the prohibition in their ordinance.

3. ADMINISTRATIVE RULES

   a. NR 326, Wis. Adm. Rule - Requirements For Seasonal And Permanent Boat Shelters:

      1) May only be placed by a riparian owner in his riparian zone. See NR 326.07 for methods of determining boundaries between zones.

      2) May not interfere with public rights or rights of other riparians.

      3) Must allow free movement of water underneath and may not cause deposition of sediment on the bed of a waterway.

      4) May not violate local ordinances.

      5) May not be placed in officially designated scenic waters except for "scenic urban waterways" (s. 30.275).
6) Must be connected to uplands by a pier.

7) Limited to a single watercraft. May not exceed 12 x 24 ft. on waters of less than 1000 acres or 14 x 24 ft. on waters of 1000 acres and larger. Existing seasonal shelters are grandfathered but may not be enlarged.

8) May have a roof but may not have walls, sides or drops. Roof must be pitched not less than 1 ft. nor more than 2.5 ft. from peak to eaves.

9) Storage must be located above the eaves.

10) May not be visually intrusive as viewed against the shoreline. Existing seasonal shelters have 5 years to comply (canopy replacement). "Visually intrusive" means clearly standing out from the shoreline background as viewed from the waterway during leaf-on conditions.

11) May contain only a single sign to identify the property and lighting required for mooring and safety (advertising prohibited).

12) The number of boat shelters per property is limited to one permanent shelter and a total of 2 (including seasonal shelters) for the first 100 feet of shoreline and 1 additional seasonal shelter for each additional 50 feet of frontage. Contiguous lots in common ownership shall be considered one property. Shelters must be grouped at a single location on a property. Existing facilities which do not comply with this provision are grandfathered but may not be expanded.

b. Additional Requirements For Seasonal Boat Shelters:

1) May be placed without a state permit if it complies with the standards above (1-12) and the requirements of this section.

2) Must be completely removed from the waterway between December 1 and April 1 (otherwise considered a permanent shelter requiring a permit and compliance with appropriate standards).

3) May not extend beyond the line of navigation (the greater of boat length, 3 ft. of water depth or deeper if required by draft of craft) or a pierhead line.

c. Additional Requirements For Permanent Boat Shelters:

1) S. 30.12 permit required.

2) Not allowed on most rivers or on lakes or flowages of less than 500 acres. May be permitted on chains of lakes that total 500 acres or more, the Mississippi River, the Wolf river upstream to Fremont and the Fox river below Lake Winnebago. A series of lakes or flowages which have a connection which is commonly navigated by motorized craft and which have a common water level shall be considered a single lake or flowage. Artificial mooring basins and navigation channels and reaches of rivers where water levels are controlled by a dam are considered part of the lake or flowage to which they are connected.

3) May only be permitted adjacent to developed shorelines. Developed shorelines are those where there are at least 5 main buildings within 500 feet of the site (including at least one on the owner's property) which are clearly visible from the waterway.
4) Maximum distance from shore (at normal summer low levels): 1) 30 ft. or the line of navigation, whichever is less, on waters of less than 1000 acres; 2) 50 ft. or the line of navigation, whichever is less, on waters of 1000 acres and larger.

5) Not allowed if the property also contains a boathouse over the water or within 75 ft. of the waterway (does not apply to shelters constructed prior to May 3, 1988).

4. **ADMINISTRATIVE INTERPRETATIONS**

A boat shelter must be removed seasonally to a location above the ordinary high-water mark to qualify as a seasonal shelter. This includes flowages that may be drawn down below the shelter site.

Any building on the property within 75 ft. of the OHWM which includes boat storage disqualifies the riparian for a permanent shelter.

**E. PERMIT PROCESS**

1. **APPLICATION**

A seasonal boat shelter which is completely removed from the waterway (above the ordinary high-water mark) between December 1 and April 1 annually and also complies with the boat shelter standards NR 326.055(1) and (2) may be placed by a riparian without a permit.

A permit is required for permanent boat shelters that are not removed seasonally. A permit may be granted to a riparian if the construction complies with the requirements in NR 326.055. A permit may not be granted for a permanent boat shelter constructed after May 3, 1988, if the owner's riparian property also contains a boathouse over navigable waters or within 75 feet of the ordinary high-water mark. A permit application must be filled out and submitted for a permanent boat shelter. A boat shelter supplement is available which specifies the information required. When an application is received, it should be carefully reviewed to ensure that all required information has been submitted. An incomplete permit application should be returned to the applicant with instructions on needed information. The following information should be submitted:

a. Do you think this is necessary? (DMP's comment)
b. c.

2. **FIELD INVESTIGATION**

The project site is inspected to evaluate the environmental and physical effects of the proposal, to evaluate and verify data supplied by the applicant such as existing riparian structures, upland development, adjacent property lines, project dimensions, and to determine if the proposal meets statutory standards (see discussion under "Design Considerations").

3. **NOTICE REQUIREMENTS**

A public notice is not required for an application received pursuant to s. 30.12(3)(a)6.
4. **FINAL DISPOSITION**

The permit should specify exactly what is being authorized under s. 30.12(3)(a)6, including a detailed location description. The permit conditions should include an expiration date for project completion, all boat shelter standards in NR 326.055, and any other conditions that may be necessary to protect the public interest including aesthetics.

Any person objecting to the decision issuing or denying a permit may seek judicial review by serving and filing a petition in accordance with the provisions of ss. 227.15 and 227.16 within 30 days of the decision date.

**F. PERMIT MONITORING**

**G. INVESTIGATION OF COMPLAINTS AND ENFORCEMENT**

**H. INFORMATIONAL MATERIALS**

1. "Boat Shelters - DNR Construction Standards" (7/8/91) - Use it as a checklist for processing permit applications, for answering questions or as a public information handout.
2. "Pier Planner" (4/92)
3. "Make Sure Your Pier Is Legal" - Annual news release includes info. on shelters esp. re. 1/1/96 deadline for replacing "visually conspicuous" canopies on seasonal shelters.
SUBCHAPTER B - BOATHOUSES

A. PURPOSE

While boathouses have been considered aids to navigation, typically their construction has been below the ordinary high-water mark (OHWM). This was for ease of access to the boathouse by a watercraft. In order to preserve and protect the adjacent waterway and minimize impacts on aesthetics these structures are now required to be constructed above the OHWM.

B. MECHANISM

S. 30.121 prohibits the placement or construction of boathouses or fixed houseboats beyond the OHWM of any navigable waterbody. The boathouse must be constructed above the OHWM and may be placed over an enlargement.

C. HISTORY

With the enactment of s. 30.02(1)(b), Wisconsin Statutes by Chapter 455, Laws of 1933, boathouses and other structures were prohibited in navigable waters. This was interpreted to refer to structures that actually interfered with navigation and the incident to navigate.

In 1949, s. 30.02 was amended to create s. 30.02(1)(b) which established a mechanism to allow structures including boathouses by permit. Chapter 101, Laws of 1979 created s. 30.121 which established a procedure for the regulation of houseboats and boathouses and prohibited any new boathouses or fixed houseboats from placement below the OHWM. NR 115.03(2)(b)(3) adopted in September, 1970 stated:

Boathouse or similar structures which require a waterfront location shall not be used for habitation nor extend toward the water beyond the ordinary high-waterline. Even with this policy, problems developed because landowners wished to build boathouses over boat slips. Some permits were issued for such construction on the basis that the rule pertained to the original OHWM.

D. STANDARDS

1. STATUTORY STANDARDS

2. RULE STANDARDS

3. MUNICIPAL AUTHORITY

4. ADMINISTRATIVE INTERPRETATIONS

   a. Applicability of boathouse repair limitations (s. 30.121) to boathouses authorized by s. 30.12. The enactment of s. 30.121 specifically limited maintenance of any fixed houseboat or boathouse after December 16, 1979. It does not make any exceptions for boathouses built under a previous 30.12 permit; therefore, these structures are subject to the regulations of s.30.121 and NR 325. (Scott Hausmann memo to District Directors, July 3, 1985.)

   b. Applicability of s. 30.121 to a licensed watercraft. A structure which has a motor and transom, is
licensed as a boat, is navigated twice a year, is used primarily as a commercial business (e.g., souvenir shop), was placed after December 16, 1979, and is secured to the bed of a navigable waterway with the use of spud poles for the entire length of the navigation season is considered a "fixed houseboat" pursuant to s.30.121(1)(b). The structure, although floatable and maneuverable, the primary purpose is not navigation [NR 325.03(8)]. (Scott Hausmann memo to District Directors, March 24, 1987.)

c. State and local authority to regulate boathouses and houseboats. (Roden memo to District Directors, January 1, 1988.)

Oneida Co. successfully denied permits to rebuild an over water boathouse which was severely damaged by windstorm. I recommend we remain mute on this issue and let counties make their own case as they will. MDD 5/92

1) A county can regulate activities below the ordinary high-water mark only if that jurisdiction is set forth in their shoreland zoning ordinance. If a boathouse has been in place prior to December 16, 1979, the specific provisions of s.30.121 control and would preempt any applicable county jurisdiction to prohibit the location and habitations of boathouses or fixed houseboats in navigable waters.

2) Between June 28, 1949 (the effective date of Chapter 235, Laws of 1949, which first allowed permits for structures), and December 16, 1979, permits could be, and were, issued for these structures although not many permits were issued and applications were opposed by the DNR in the 70s. While any boathouse or fixed houseboat built during this time without a permit is unauthorized, s.30.121(3) provides a mechanism to maintain those structures.

d. Boathouse over waterway enlargements. S.30.121(3)(m) allows for boathouses over certain authorized waterway enlargements. This represents a change from prior statutory and common law by allowing enclosure and private use of some waterway enlargements. We should place appropriate permit conditions on any proposed waterway enlargement applications that may subsequently be enclosed by a boathouse. Natural shoreline aesthetics and the effect of construction on the shoreline and adjacent waterway are among the concerns to be considered when evaluating a permit application to allow wet boathouse construction. These concerns will preclude most wet boathouse construction for multiple boat storage. (Scott Hausmann memo to District Director, December 5, 1988.)

E. PERMIT PROCESS

F. PERMIT MONITORING

G. INVESTIGATION OF COMPLAINTS AND ENFORCEMENT

H. INFORMATIONAL MATERIALS
DATE: March 31, 1994
TO: Holders of the Water Regulation Guidebook
FROM: Robert Roden - WZ/6
SUBJECT: New Guidebook Chapter 76, Boat Shelters and Boat Houses

I'm very pleased to provide you with copies of a new chapter of the Water Regulation Guidebook. Attached you will find Chapter 76, Boat Shelters and Boat Houses.

Creation of this chapter was a joint effort by Section, District and Area staff. The assigned team members, John Coke, Dick Koch, Ed Slaminski and Jack Smith, worked very well together and I'd like to thank them for their fine effort.

cc: Ken Johnson - WZ/6
    Scott Hausmann - WZ/6
    Larry Larson - WZ/6
    Dick Knitter - WZ/6

Attachment
ATTACHMENT A

Boat Shelter Application Requirements

1. Name, Address, Telephone Number (both home and office).

2. Address of project site. Both tax parcel number and fire number.

3. Copy of deed or tax receipt.

4. Location sketch on how to get to your property.

5. Project plans (shall include both top and side view) Top view must be to scale and show the following:
   a. Your lot line and those of adjacent properties.
   b. Existing or proposed piers.
   c. The existing shoreline.
   d. Location of structure on your property.
   e. Any existing boathouses either on shore or in the water.
   f. The proposed shelter location.
   g. Depth of water at the waterward end of the shelter.

The side view must include:
   a. Boat shelter with all dimensions.
   b. Pier showing depth of water at the end.

6. Proposed materials list including color of proposed shelter.

7. Color photos of the construction site and adjacent shoreline to show extent of nearby development as viewed from the water.

8. Type of watercraft to be stored there including length, width, and draft needed.

9. Size of your lake or flowage in acres.
# ATTACHMENT B

## BOATHOUSE MAINTENANCE & REPAIR COST WORKSHEET

### FOUNDATION:

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<th>Item</th>
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ATTACHMENT C

INFORMATION FOR BOATHOUSE REPAIR CERTIFICATION

DNR DOCKET #__________________________

Section 30.121 Stats.

<table>
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<tr>
<th>Owner</th>
<th>Contractor/Agent</th>
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<td>Name</td>
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<td>Address</td>
<td>Address</td>
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<tr>
<td>Telephone</td>
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Boathouse Address (Include Fire or I.D. No.)

<table>
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<tr>
<th>Waterway</th>
<th>County</th>
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Legal Description: Govt Lot-stage, ______, 1/4 ______ 1/4, Section ______, Township ______ North, Range ______ East.

City/Village/Town of ________________________

Property Tax Number (for boathouse location)

List prior owners after 12/16/79

Signature of Applicant                      Date

Attach the following:

1. Statement signed by the assessor giving the equalized assessed value of the boathouse or a copy of the official assessment role which gives this information. If the boathouse is not assessed, or if it cannot be separately distinguished from the general property assessment, attach a statement from the assessor stating this. You may then submit an appraisal of the current fair market value certified by a competent appraiser using standard real estate appraisal techniques.

2. A map showing the location of the boathouse and directions to the site. Include the fire number.

3. Photographs or plans which clearly show the appearance of the boathouse, foundation, structural framework, siding and roofing.

4. A statement of the needed repairs and maintenance for all necessary work and a cost estimate for the work.

5. A copy of the deed with any deed attachment and tax statement which states the full legal description.

6. A listing of any prior maintenance work and date -- back to 1979.

The Department will respond by letter as soon as possible. Any work done to a boathouse over water without Department approval will result in prosecution of the owner and contractor with the possibility of the court ordering complete removal at the owner's expense.
DATE: April 29, 1994

TO: District Directors (Water Regulation Supervisors)

Distribution: Water Regulation Staff
Bureau of Legal Services
Department of Justice - Environmental Unit
County, City and Village Zoning Administrators

Insertion: Chapter 76, Water Regulation Handbook
Chapter 4, Floodplain/Shoreland Management Guidebook

FROM: Scott Hausmann - WZ/6

SUBJECT: Oneida County v. Converse
Wisconsin Supreme Court decision, filed December 8, 1993

A copy of this decision was distributed to Water Regulation staff on December 9, 1993. I am responding to a number of questions that we have been asked since then about the implications of this Supreme Court decision on water regulation and zoning programs.

Facts of the Case

Since 1945, the Converses owned a two-story wet boathouse (one which extends beyond the ordinary high water mark) on Lake Tomahawk in Oneida County. The boathouse was destroyed by a tornado on April 27, 1984. It was at that time a nonconforming use under Section 9.51(D) of the Oneida County Zoning and Shorelands Protection Ordinance, which states that no boathouse may extend beyond the ordinary high water mark. The boathouse was also subject to repair and maintenance restrictions under Section 30.121, Wis. Stats. Section 30.121 states that "after 12/16/79, no boathouse or fixed houseboat may be constructed beyond the ordinary high water mark of a navigable waterway." This section also limits repair and maintenance of boathouses or fixed houseboats in existence prior to 12/16/79 to 50% of their equalized assessed value.

The Converses' application for a permit to rebuild the boathouse was denied by the Oneida County Zoning Administrator. Upon appeal, the Zoning Administrator's decision was upheld by the County Board of Adjustment. The Converses rebuilt the boathouse in Spring, 1985, and the County filed suit in circuit court, claiming violation of Section 9.51(D) of its ordinance because repairs would exceed 50% of the boathouse value. As a defense, the Converses relied on NR 325.065, Wis. Admin. Code, which exempts boathouses or fixed houseboats from the 50% repair and maintenance limitation if they were damaged by violent wind, vandalism, or fire.

Sequence of Court Decisions

Oneida County Circuit Court ruled in favor of the county. The Converses were fined $11,000 and ordered to remove the boathouse.

The Court of Appeals reversed in November, 1992, based on the conflict between county and state standards.

The Wisconsin Supreme Court reversed the Court of Appeals decision and reinstated the Circuit Court judgment.
It found that NR 325.065 was invalid because it was inconsistent with Section 30.121(3), Wis. Stats. The Converse were therefore bound by Oneida County ordinance provisions. The Converse boathouse has since been removed.

Implications for Local Zoning and DNR Water Regulation Programs

**Zoning.** Local zoning ordinance limitations on repairs, alterations, or additions to nonconforming uses and structures (the "50% Rule" or some other policy) continue to apply to nonconforming boathouses as well as other nonconforming structures.

**Water Regulation.** The exemption from the 50% repair and maintenance provisions in NR 325.065 on boathouses destroyed by violent wind, vandalism or fire is invalid as of December 8, 1993, the Supreme Court decision filing date. The following describes the implications for a few specific situations.

1. **Wet boathouses and fixed houseboats destroyed by violent wind, vandalism or fire where DNR approval was obtained and the structures were rebuilt prior to December 8, 1993.** These rebuilt boathouses/structures are not affected by the Converse decision. The rebuilt wet boathouses/structures are subject to Section 30.121, Wis. Stats. limitations, and therefore once they have been repaired or maintained in excess of 50% of their equalized assessed value, they may not be further repaired. The 50% cumulative clock starts at the time the structure was rebuilt. When the structure falls into a major state of disrepair it must be ordered removed.

2. **Wet boathouses and fixed houseboats destroyed by violent wind, vandalism or fire, but that were NOT rebuilt prior to December 8, 1993.** Regardless of whether or not DNR approval for rebuilding had already been obtained, if the structure was not rebuilt prior to December 8, 1993, it may not be reconstructed. If DNR staff are aware of any pending reconstruction of previously exempt structures, they should immediately advise the owners of the change in status of their structures.

3. **Wet boathouses destroyed by violent wind, vandalism or fire after December 8, 1993.** Because repair or maintenance would exceed 50% of the structures' equalized assessed value, they may not be rebuilt.

Drafted by: Susan Jones - WZ/6
Reviewed by: Ken Johnson - WZ/6
Michael Cain - LC/5
Linda Meyer - LC/5
GUIDANCE PURPOSE AND DISCLAIMER

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance cannot be relied upon and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes, common law and administrative rules to the relevant facts.

This file is an electronic version of a chapter of the Waterway and Wetland Handbook. This document was scanned from the master handbook chapter kept at the Bureau of Fisheries and Habitat Protection central office in Madison. All effort was made to ensure this scanned electronic copy is an actual copy of the hardcopy document. Due to the electronic scanning process, there may be rare instances of typographical errors, omissions or improperly formatted pages. Please refer to the master handbook if accurate transcription is required.

Authorizing the construction of bridges over navigable streams

PURPOSE

A fundamental principle in Wisconsin is that navigable waters are common highways and should remain forever free for public use. Various rules and statutes now regulate the construction of bridges over navigable streams. The regulations allow the Department to control the degree of obstruction in or over streams, to minimize their potential obstruction to flood flows, to minimize erosion, sedimentation and washout potential, and in some instances to ensure their structural adequacy.

MECHANISM

Permits, approvals, or a combination of permits and approvals are issued by the Department to authorize new bridge construction.

Section 30.10, Wis. Stats., requires approval of the Department prior to constructing a bridge over a navigable stream less than 35 feet wide. There is no mechanism for approving a clear span bridge over a portion of a lake which is less than 35 feet wide.

Section 30.12, Wis. Stats., requires a structure permit for any portion of a bridge which rests on the bed of a navigable lake or stream. Thus a bridge with center supports which crosses a stream less than 35 feet wide would require bridge approval and a structure permit.
Section 31.23, Wis. Stats., requires a permit for a bridge over navigable waters (a stream or portion of a lake) 35 feet or more in width. If any portion of the bridge rests on the bed of the waterway, a structure permit would also be required.

Section 30.12(4), Wis. Stats., specifies that highway and bridge activities including municipal projects conducted under the direction and supervision of the Department of Transportation are not subject to the prohibitions or permit or approval requirements of various statutes. Such activities must, however, be performed in accordance with inter-Departmental liaison procedures or the exemption does not apply (see the attached copy of the Cooperative Agreement between DOT and DNR dated 10-25-76).

Sections 30.10 and 30.123, Wis. Stats., exempt municipal highway bridges from permits or approvals under ss. 30.10, 30.12 or 31.23 (municipal nonhighway bridges would require appropriate permits). However, all municipal highway bridges shall be constructed according to the standards of Trans 207, Wis. Adm. Code, or the municipality is subject to enforcement action. Conceptual plans for municipal highway projects are to be submitted to the Department for evaluation and recommendations regarding clearance, flood flow capacity and erosion control. Permits or approvals under ss. 30.11, 30.195 or 30.20 would still be required if appropriate. Minor waterway modifications needed to construct a bridge do not require permits. Temporary roads, access roads or cofferdams needed for completion of the project would not require separate permits since they are considered to be necessary to complete the highway construction.

Section 30.122, Wis. Stats., provides that structures constructed prior to December 9, 1977, which did not require a permit at the time, are presumed to be in conformity with the law. This statute does apply to bridge crossings since the department and its predecessor agencies for many years considered that these crossings required no permit or approval authority unless they crossed navigable waters at least 35 feet wide, in which case a bridge permit was required. This practice continued until a 1974 Bureau of Legal Services opinion advised that a bridge over a stream which did not require a permit required plan approval in order to comply with s. 30.10, Wis. Stats. This status (s. 30.122) does not legalize older bridge crossings. If a bridge should prove to be an obstruction to navigation, enforcement action pursuant to s. 30.15, can be initiated.

**HISTORY**

The history of regulation and control of bridges over navigable streams is not entirely clear. A considerable research effort would be required to dot the i's and cross the t's. The initial prohibition of obstructions, including bridges, in or over rivers or streams was adopted by the Territorial Legislature of 1841 (Act No. 9) and remains nearly unchanged today as s. 30.10(2), Wis. Stats. Chapter 72, Laws of 1853, amended the act by adding "...provided that nothing herein contained shall be construed so as to affect any act now in force granting towns or county boards of supervisors the power to erect or authorize the construction of bridges across such streams."

Despite this apparent exemption, the legislature adopted session laws specifically to authorize municipal highway bridges until 1917. From 1917 to 1974 the Department and its predecessor agencies apparently did not require municipalities to receive permits or approvals explicitly for highway bridges or culverts, although orders were issued pursuant to s. 31.25, Wis. Stats., to abate bridges or culverts which were an obstruction to navigation. In 1974 and 1975 the Department did require municipalities to secure permits for bridge construction as a result of a circuit court decision (Public Intervenor v. Department of Natural Resources and Eau Claire County Highway Department). A subsequent Attorney General's Opinion (OAG-34-75), which the Department was obliged to follow, stated that municipalities were exempt from permit requirements. In 1976, Chapter NR 320, Wis. Adm. Code, "Regulation of Bridges in or Over Navigable Waterways" was adopted by the Department in part to codify the law relating to municipal bridges. In 1977, s. 30.10(4) was modified and ss. 30.123 and 84.01(23), were added to clarify the fact that municipal highway bridges did not need permits but that they had to be constructed in accordance with standards developed by the Department of Transportation in consultation with the
Department. On July 1, 1981, Chapter Trans 207, Wis. Adm. Code, containing design and construction standards for municipal highway bridges, became effective.

Chapter 38, Laws of 1853, appears to be the first general law relating to the construction of railroads. Essentially the same language appears today in ss. 190.02(5) and 190.08, Wis. Stats. This law granted railroad corporations the power to construct their railroad on or over a stream or watercourse provided that they restored the waterway to its former state or to such condition that its usefulness would not be materially impaired.

Chapter 454, Laws of 1907, required railroad corporations to receive a certificate "that public convenience and a necessity require the construction of the railroad." The Railroad Commission (established by Chapter 362, Laws of 1905) held hearings on applications and decided whether or not such a certificate should be issued. If railroad corporations received the required certificate they were then required to submit plans for railroad grades and bridges to the Railroad Commission for approval. The Railroad Commission was charged with examining the plans, suggesting modifications of the plans if necessary for public safety and authorizing the construction of the railroad. Upon completion of the railroad construction the commission inspected the project, and if it was properly constructed in accordance with the plans the commission issued an order authorizing operation of the railroad. Presumably, these reviews addressed the general requirement that streams be restored to their former usefulness upon completion of the railroad construction. Essentially the same procedure is required today except that these responsibilities have been delegated to the Transportation Commission of the Department of Transportation (Chapter 29, Laws of 1977). Prior to 1977 these duties were handled by the Public Service Commission.

Although the Railroad Commission apparently had been delegated authority to approve railroad bridges, the Legislature adopted session laws specifically to authorize them until 1917.

The legislature created laws allowing permits to be issued for structures, such as culverts (Chapter 335, Laws of 1949) and certain bridges (Chapter 331, Laws of 1941), but application of those laws to railroad bridges was unsettled. On January 5, 1973, in a legal opinion to the water regulation section, the Bureau of Legal Services opined that railroad corporations were not exempt from permit requirements. Since that time the Department has required railroad corporations to apply for permits for the construction or replacement of bridges and culverts.

As in the case of municipal highway bridges and railroad bridges, the legislature authorized many private bridges through various session laws at least up to 1917. Until the laws allowing permits to be issued for bridges and culverts were passed, private bridges were generally allowed on the theory that a riparian owner had a common law right to construct and make a reasonable use of a structure provided that the stream was not so obstructed as to materially impair its usefulness for the purpose of navigation. In other words, an obstruction in navigable stream which did not impair free navigation, although not authorized by law, was not considered a nuisance and unlawful. This basic philosophy was followed by the Railroad Commission, Public Service Commission and the Department until 1974, except in the case of bridges requiring a permit user ss. 30.12 or 31.23, Wis. Stats. In 1974 the Department began requiring and issuing a formal approval for clear span bridges to grant "the permission of the state” expressed in s. 30.10.

The history of private bridge regulation was further complicated by an internal policy regarding culverts. Culverts which occupied the entire bed of a stream or even culverts with fill which crossed a stream less than 35 feet wide were considered bridges rather than structures and no formal authority was required. Since 1974 such crossings have been considered structures under s. 30.12 Wis. Stats., and a permit has been required. (See Chapter 85, Culvert Waterway Crossings.)

Even though many “bridges” were constructed in apparent violation of the statues until either 1941 or 1974, the Department and its predecessor agencies usually took enforcement action only on bridges which were believed to obstruct navigation. In most instances the owners were simply ordered to provide a larger bridge or increase navigational clearance.
STANDARDS

Statutory Standards

1. Approvals. In s. 30.10 (2), Wis. Stats., no specific standards are mentioned although a bridge is clearly described as an obstruction which may be constructed over a stream only with the permission of the state. Bridge approvals are not required and should not be issued for clear span bridges crossing a portion of a lake less than 35 feet wide. Control over these types of bridges would be of an advisory nature to prevent obstructions to navigation or enforcement actions under ss. 30.15(1)(a) or 31.23(1).

2. Structure Permit. Sec. 30.12(2)(a), Wis. Stats., contains standards which require that structures:
   a. do not materially obstruct navigation;
   b. do not reduce the effective flood flow capacity of a stream;
   c. will not be detrimental to the public interest.

   In addition, permits may only be granted to a riparian owner (or lessee) to build or maintain a structure for the owners’ use. The fact that municipal highways (bridges) were for public use and not for the municipality’s "own use" was a determinative factor in the attorney general’s opinion that municipalities were exempt from permit requirements.

3. Bridge Permit. Section 31.23, Wis. Stats., requires:
   a. a permit for construction of a bridge over navigable water 35 feet or more in width (between ordinary high-water marks). For a stream, the regulatory width should be considered the average width of the particular "reach" of stream in question;
   b. that the bridge must not impair the rights of the public for purposes of navigation or fishing;
   c. "every such bridge used by the public shall at all times be maintained in a safe condition..."

   A bureau of Legal Services Opinion issued 7-778 has interpreted s. 31.23(3)(d), Wis. Stats., to mean that bridges which require a permit must be evaluated for structural adequacy. Such an evaluation is not required for bridges approved pursuant to s. 30.10, although bridges with obvious deficiencies should not be approved.

4. Permit Exemption. Section 30.123, Wis. Stats., exempts municipalities from certain permits for construction or reconstruction of highway bridges. The definition of "municipal highway bridge" contained in Chapter NR 320.03(6) should be applied. Note that pedestrian or vehicular bridges for nonhighway purposes are not excluded from permit requirements.

ADMINISTRATIVE CODE STANDARDS

1. Wetlands. NR 1.95, Wis. Adm. Code, establishes general standards to be applied by the Department in decisions affecting wetlands. The Department presumes that wetlands are not to be adversely impacted or destroyed. NR 1.95 further specifies the balancing test to be used by the Department when determining the potential adverse effects of a project on a wetland versus the benefit to the applicant.
2. **Shoreland areas.** NR 115, Wis. Adm. Code, establishes administrative standards to be followed by counties in their administration of shoreland zoning ordinances. These standards should be reflected in approving bridges.

3. **Floodplain areas.** NR 116, Wis. Adm. Code, establishes administrative standards to be followed by local units of government in their administration of floodplain zoning ordinances. Permits should require applicants to conform with standards established in NR 116.

4. **Environmental impact.** NR 150, Wis. Adm. Code, establishes procedures for determining whether a given project requires an Environmental Impact Statement (EIS). Bridges are Type III actions which do not normally require an environment assessment.

5. **Bridges.** NR 320, Wis. Adm. Code, establishes clearance requirements, flood flow requirements and plan and information requirements for permits or approvals.

6. **Municipal Highway Bridges.** Trans 207, Wis. Adm. Code, establishes design and construction requirements for municipal highway bridges and a Department review procedure to be initiated by municipalities. (Municipal highway bridges constructed under the direction or supervision of DOT are to be evaluated in accordance with the DOT Liaison Agreement.)

**ADMINISTRATIVE INTERPRETATIONS:**

1. **Railroad Bridges.** Bureau of Legal Services opinions (1-5-73, 1-18-79 and 7-25-79). Railroad corporations are not exempt from bridge or structure permit requirements. According to S. 190.08, Wis. Stats., upon abandonment of a railroad, watercourses shall be restored to their former state or to such conditions that their usefulness shall not be materially impaired.

2. **Approval of Bridges.** Bureau of Legal Services opinion (10-274). Private bridges over streams less than 35 feet wide need plan approval to grant the permission of the state as required by s. 30. 10, Wis. Stats.

3. **Temporary Bridges.** Bureau of Legal Services opinion (1-10-75). Temporary bridges require permits or approvals where appropriate.

4. **Enforcement Authority over Municipal Bridges.** Bureau of Legal Services opinion (3-24-78). The Department may take enforcement action against municipalities who fail to construct highway bridges or culverts in accordance with the standards of Trans 207, Wis. Adm. Code.

5. **Structural Adequacy of Bridges.** Bureau of Legal Services opinion (7-7-78). Bridges permitted under s. 31.23, Wis. Stats., must be reviewed for structural adequacy whereas this evaluation is not required for other bridges.

6. **County Forest Road Crossings.** Bureau of Water Regulation and Zoning (WRZ) program guidance (210-82). If the forest road is a public highway Trans 207, Wis. Adm. Code, procedures should be followed.

7. **Department Responsibilities under Trans 207, Wis. Adm. Code.** Division Administrator program guidance (9-11-81). This is an eight page guidance and should be referred to directly (copy attached).

8. **Program Guidance, Trans 207, Wis. Adm. Code.** Bureau of WRZ guidance (3-16-82). This is a four page guidance and should be referred to directly (copy attached).
PROCESS

Application:

In order to perform the required technical reviews, applications must contain sufficient information (see discussion under design considerations). Because a structural evaluation must be performed for a private bridge that requires a permit pursuant to s. 31.23, Wis. Stats., and hydraulic analysis may be required, it is highly desirable that the plans be prepared by an engineer.

If the proposed bridge utilizes center supports, piers or abutments on the bed of the waterway, the standards of S. 30.12, Wis. Stats., come into play and must be addressed in the permit processing and field investigation.

Plans for construction procedures and devices (cofferdams, etc.) should be submitted with the application so authority for them can be incorporated in the permit.

Field Investigation:

The field investigation is undertaken to evaluate the environmental and physical effects of the proposal and to evaluate and verify other data supplied by the applicant such as soil type, floodplain cross-sectional data, fill requirements, etc. (see discussion under design considerations). It is desirable to complete the field investigation prior to issuing a public notice. This procedure would allow the Department to determine its position prior to the expiration of the notice period in the event that the Department wishes to request a hearing.

Notice Requirements:

A public notice is required for any private bridge crossing navigable waters having a width of 35 feet or more. Notice is also required for bridges regulated under s. 30.12, Wis. Stats. An exception to this requirement might be when department personnel are clearly in opposition, due to nonconformance with statutory standards, in which case a notice of public hearing could be issued since s. 31.06, Wis. Stats., allows this option. In some cases where it is recognized that a hearing will be required it may be desirable to issue a notice of proposal to solicit public opinions, particularly when the project is suspected to be highly controversial.

Design Considerations

1. Culverts vs. Bridges

   Generally, the majority of private stream crossings use culverts; however, there are many instances when bridges are highly desirable and may be the only feasible method for crossing a stream.

   Bridges offer several advantages over culverts including less disturbance of normal flow patterns. The use of culverts often results in increased flow velocities. Such increases could serve to inhibit fish movement and increase erosion downstream. While the use of a bridge usually minimizes this problem, it should also be recognized that it may be a more costly alternative. The investigator should be cautioned that the advantages of a bridge over a culvert(s) should be determined on a case-by-case basis.

2. Hydraulic Review

   Chapter NR 320, Wis. Adm. Code, specifies which bridges will need detailed hydraulic review and which will not. Briefly, any private clear span bridge that uses approach fills less than 1 foot high and 15 feet long does not require a hydraulic review. Any bridge which requires piers or more fill than cited above
requires a hydraulic review. The word ramp as used in the code means approach fill. Use of an open structural approach ramp regardless of length and height generally does not require hydraulic review.

If hydraulic calculations are required, an application should contain:

a) A location map of sufficient detail to allow field staff to easily locate the project site.

b) Plan view of project showing:
   1. Property lines
   2. Location of waterway
   3. Existing buildings, roads or bridges
   4. Location of bridge and roadway

c) Detailed plans of the bridge and road fill
   1. Skew of the bridge - the angle between the direction of the stream flow and a line perpendicular to the bridge center line.
   2. Description of the abutments -
      a. angle of the wingwalls
      b. materials to be used
      c. distance between abutments at the base and at the top
      d. elevations of the base and top of the abutment
   3. Elevations of supporting beams and/or trusses
   4. Road grade (entire fill plus bridge deck elevation)
   5. Normal high water elevation

d) Floodplain cross section

A floodplain cross section is required to conduct a hydraulic analysis for a bridge crossing. The cross section must extend to an elevation above the regional floodplain. The cross section should be representative of the floodplain in the vicinity of the bridge. If a natural or man-made constriction exists either upstream or downstream of the crossing site, an additional cross section should be provided at the constriction. If the constriction is a bridge or culvert, a road profile and structure dimensions and elevations should be submitted. A constriction upstream may cause flood elevations higher than the proposed crossing thereby minimizing any adverse backwater effects. A constriction downstream may affect the flood elevation at the proposed crossing.

e) Other information necessary to complete hydraulic review include:

1. Stream slope. Elevations of the water surface 1,0000 feet upstream and 1,000 feet downstream as well as at any intervening changes in water surface profile.

2. Photographs of floodplain cross section(s). Photographs are necessary to accurately estimate channel and overbank roughness factors.

   NOTE: It is highly desirable that stream slopes and floodplain cross section(s) be surveyed by an engineer, surveyor or government technician in order to accurately analyze a project.

3. Structural Review
The department must certify the structural stability of private bridges which cross navigable waters 35 feet or more in width. This structural certification puts a degree of liability on the department, therefore, the bridge application must be complete.

NOTE: Bridges approved under s. 30. 10, Wis. Stats., do not require structural evaluation; however, a bridge which is obviously deficient should not be approved without modification.

The following information may be required:

A. Soil borings
   1. at abutments
   2. channel

B. Abutment details
   1. concrete
      a. reinforcing location and size
      b. footing details
   2. piles
      a. depth piles will be driven
      b. dimensions of piles
      c. description of materials
   3. wood cribs
      a. dimensions of materials
      b. construction details
      c. type and treatment of wood

C. Deck details
   1. location and dimension of beams
   2. dimension of decking material
   3. description of materials

D. Anticipated usage
   1. average load
   2. maximum load

E. Joint details
   1. pier caps
   2. sill plates
   3. splice plates
   4. types of connections including size of connectors

**FINAL DISPOSITION**

Bridge approvals (or denials) are issued by letter. A bridge which also includes a structure on the bed of the waterway or which crosses a waterway over 35 feet wide must receive a permit. Permits under ss. 30.12 or 31.23, Wis. Stats., can only be denied by a hearing examiner.

Any person objecting to the decision issuing or denying a permit or approval may seek judicial review by serving and filing a petition in accordance with the provisions of sections 227.15 and 227.16, Wis. Stats., within thirty (30) days of the decision date.
MONITORING

Permits or approvals should require the applicant to notify the Department five days before starting work and within five days of completion of the work. There should be a follow-up inspection to determine whether the work was done in accordance with the approved plans. Enforcement actions should be considered if the work deviates significantly from the plans.

EMERGENCY PROCEDURES

On occasion existing bridges may sustain damage or fail due to flooding or accidents. If the bridge is authorized or "presumed in conformity with the law" we should allow repair or reconstruction without invoking permit requirements. Generally if a bridge needs to be replaced we should require the replacement to be of at least equal hydraulic capacity.

ENFORCEMENT

A bridge in violation of s. 30.10(2), Wis. Stats., may be prosecuted pursuant to ss. 30.15(l)(A), 31.23(l) Or 31.25, Wis. Stats. A bridge which crosses a portion of a lake less than 35 feet wide may be prosecuted pursuant to ss. 30.15(l)(a) or 31.23(l), Wis. Stats. A bridge in violation of s. 30.12, Wis. Stats., may be prosecuted pursuant to ss. 30.12(3) or 30.15, Wis. Stats, in addition to any section which applies to bridges.

Educational Materials

Pamphlets "Wisconsin's Water Regulation Programs Work for You"; "Public or Private? I--Navigability"; and "Public or Private? II--The Ordinary High Water Mark."

2823H
Procedure
E-D-3800

Manual
DESIGN
Subject AGENCY LIAISON (STATE)
Department of Natural Resources

Cooperative Agreement
Appendix A Agreement
Between DOT & DNR

Department of Natural Resources
INTRA-DEPARTMENT
MEMORANDUM

DATE: October 25, 1976 IN REPLY REFER TO: 1440

TO: District Directors

FROM: Anthony S. Earl

Re: Cooperative Agreement between Wisconsin Department Transportation and Department of Natural Resources

Attached for immediate use is a copy of the subject agreement recently signed by the Department of Transportation and by our department. This was worked out through the combined efforts of the two departments for the purpose of formally approving previously established understandings and cooperative work efforts.

Please see that all members of your staffs receive the information contained in this agreement so that these procedures may be followed throughout the state by all DNR personnel.

I feel confident everyone in our department will continue to exercise full cooperation with the Department of Transportation in the manner indicated by this agreement. We are sure this joint effort will be observed by DOT as is shown by their wholehearted cooperation in accomplishing the "Cooperative Agreement."

Should you have any comments or suggestions, please feel free to contact us.

Anthony S. Earl
Secretary

ASE:hs
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Attached as appendix A to this Procedure is a recently executed cooperative agreement entitled Cooperative Agreement between Wisconsin Department of Transportation and Department of Natural Resources.

This agreement is intended to be a formal declaration of how the two departments will continue to coordinate and cooperate without DOT obtaining permits for work in/over navigable waters. It basically constitutes a formalized statement of previously established understandings and cooperative work efforts.

The primary benefit of this agreement will be its use as a uniform statement of policy. It has been sent to the DNR District Offices for the purpose of insuring that the associated procedures are followed throughout the state by all DNR Personnel.

Although a basic premise of this agreement is that DOT is not required to obtain permits from DNR under State Statutes, it is also emphatic that project development will give full consideration to the spirit and intent of pertinent laws to insure that projects are developed in the total public interest. It is expected on the part of both departments that full and mutual cooperation will be forthcoming in carrying out the principals of this agreement as was exemplified in the cooperative work effort in its formulation.
I. Statement of Purposes

The Wisconsin Department of Transportation (DOT) and the Department of Natural Resources (DNR) recognize that the Wisconsin Legislature has charged DNR with the responsibility for protecting the State's land, water, fish and wildlife resources; and has charged DOT with furnishing the citizens of Wisconsin with an adequate, safe and economical transportation system. The DOT and DNR further recognize that the construction, reconstruction, maintenance and repair of transportation facilities, including highways and bridges, may have potentially adverse effects on the environment.

Therefore, the DOT and DNR agree that in the interest of fulfilling their respective duties, and to provide a reasonable and economical procedure for carrying them out in a manner that is in the total public interest, the DOT and DNR will consult and cooperate with each other such that each can accomplish its assigned statutory responsibilities while assuring at the same time adverse effects on Wisconsin's land, water, fish, and wildlife resources are minimized to the fullest extent practicable under the legislative mandates.

II. General Liaison, DOT Project Development Activities

Liaison between the departments on projects under consideration for development by DOT will be guided by the following:

A. DOT will provide DNR with copies of notices of intention to make changes in the State Trunk Highway System, notices of hearings scheduled for proposed changes, copies of annual proposed highway improvement programs, and copies of Federal and State Environmental Impact Statements. Other notices and documentation will be provided upon request.

B. DOT will inform DNR of proposed new construction by providing copies of pertinent inter-departmental memoranda and preliminary plans indicating location and nature of work,
immediately following authorization to incur engineering expenditures, to insure that DNR has this data at the earliest possible date.

C. DNR will review proposed improvements and make the recommendations necessary to comply with applicable environmental and regulatory requirements. DNR, in making its review and recommendations, will recognize that it is the policy of the state to provide a safe and economic transportation system with a minimal environmental impact.

D. DOT will give consideration to such DNR recommendations incident to the location, design, construction and maintenance of facilities. If DOT feels that it is not practical to comply with the DNR recommendations, appropriate Department staffs will meet and resolve any differences. In such considerations, both Departments will keep in mind the total needs of the public as well as the specific needs that each is mandated to administer.

E. DNR and DOT district offices and central offices will maintain close liaison to achieve the objectives of this agreement.

F. DOT will monitor the activities of the Contractor to assure that the environmental and regulatory requirements for the project are being met.

III. DNR Projects

On those projects contemplated by DNR which will result in special land-use restrictions such as presently found in the Federal Land and Water Conservation Act (LAWCON) and the 1966 Federal DOT Act (Section 4(f)), DNR will inform DOT of such restrictions, if known, prior to committing action so that measures to provide for needed transportation corridors can be taken as much as is practical.

IV. Mutual Concurrence on Actions

A. It is the intent of this agreement that joint review of projects will result in concurrence on the proper course of action to comply with the statutory obligations of which agency.

B. Actions by contractors - DOT usually implements its actions by letting contracts to the lowest qualified bidder. In these contracts the final product is usually specified in great detail, but the method of operations is left to the contractors discretion. The climate of competitive bidding and relatively free choice of methods stimulates creativity and results in lower costs of the public. The contractors methods, however, are not specifically a part of the liaison and coordination described under 11 because the contractor is not known until the very last stages of action.

To insure that environmental regulations are complied with in all applicable areas, such as stream crossings and wetland encroachments, DOT will require contractors to submit a plan of operation for review and approval by DOT. Further liaison with DNR will be necessary if the construction methods proposed in the operation plan have not been reviewed and concurred in by DNR during previous liaison on the project. Evidence of approval will be kept in the DOT engineers field office with a copy sent to the appropriate DNR district office. A contractor's operation which has been approved under this procedure shall be treated by DNR as an action by DOT.
C. Projects administered by Division of Highways for other governmental units - DOT frequently administers transportation projects for counties, municipalities, and other local governing units as part of its statutory responsibilities. Those projects on which DOT exercises administrative control of plan preparation and contract supervision will be considered by DNR to be actions by DOT itself.

V. Structures Over and In Waterways

A. Consistent with the above concepts DOT recognizes that DNR has developed criteria specified in Administrative Codes NR 116 and NR 320 concerning flood plain encroachments, stream profiles, and navigational clearances. DOT concurs with the spirit and intent of these Codes and will provide DNR and affected local units of government with information indicating the criteria used in the design and placement of structures in relation to the regional flood. DOT will cooperate fully with local units of government on their effort to minimize flooding effects and meet their responsibilities in flood plain zoning.

DOT considers discharge capacities, backwater elevations, potential upstream and downstream water damages, and protection of the roadway in the design of any water-related structure. It also considers the property rights of present and future riparian owners, upstream and downstream, consistent with the constitutional principle of just compensation.

B. Construction in areas having a potential for flooding associated with a defined stream channel DOT shall compute the 100 year regional flood discharge and elevations as defined in NR 116 and NR 320. In determining structure size and placement, DOT will consider flood plain management standards pursuant to NR 116 and relevant local ordinances. Upon completion of the design, predicted water surface elevations and calculations will be made available to the applicable zoning authorities and DNR for their use.

C. Construction in areas having a potential for flooding but not associated with a defined stream channel - In determining structure size and placement for these areas DOT will maintain consistency with the above concepts in A and B except that the 100-year flood elevations and zoning considerations will only be made when they appear relevant to the spirit and intent of NR 116.

D. Replacement Structures - DOT will normally consider replacement structures in relation to 100-year flood elevations, as they may occur with such existing structures in place. In these cases, however, DOT will also compute 100-year water elevations under natural stream conditions and may design the new structure to accommodate the natural condition if it appears to be in the public interest. Pertinent elevations will be made available to affected local units of government and DNR as discussed under A to C above.

VI. Maintenance and Removal of Existing Structures

It is mutually recognized that DOT has the authority and responsibility to preserve the integrity of public-funded highways by means of a sound maintenance program. Also, the creation of a new highway often includes the removal of existing structures or roadbeds which are unusable or obsolete.

On normal planned highway maintenance and structure removal DOT will maintain liaison with the DNR district Office in the same manner as is set forth earlier in this agreement for
construction projects. It is recognized that emergency maintenance activities necessitate expedited liaison procedures. In emergency maintenance situations DOT will contact the DNR District Office and furnish details on the project. However, the degree of notice furnished to DNR in emergency situations will be in direct correlation to the severity of the emergency. All efforts will be made by DOT to give as lengthy a notice as is possible. In emergency maintenance situations DNR will submit its recommendations on the project on DOT on an expedited basis.

DOT will maintain close liaison with DNR, as discussed throughout this agreement, to insure that the use of explosives does not resolve in damage to waterways, wetlands, and other environmentally sensitive areas nor result in the destruction of fish or game.

Wisconsin Department of Natural Resources
Anthony S. Earl, Secretary Date: 21 Oct. 1976

Wisconsin Highway Commission
John W. Fuller, Secretary Date: 12 Oct. 1976

Zel S. Rice II, Secretary Date: 11 Oct. 1976
CORRESPONDENCE/ MEMORANDUM

DATE: September 11, 1981

TO: District Directors

FROM: George E. Meyer - ADM/5

SUBJECT: Department Responsibilities Under Chapter Trans 207, Wisconsin Administrative Code

As you know, Chapter Trans 207, Wisconsin Administrative Code, (the municipal bridge standards) became effective with its publication on July 1, 1981. At this time, a lawsuit has been filed by the Public Intervenor and Trout Unlimited challenging the constitutionality of the rule on the basis of excessive delegation of authority from the state to local units of government. Nevertheless, in the absence of a restraining order or injunction preventing our use of the rule, we will continue to administer it as required.

Copies of the rule have been sent to all Districts and the Bureaus of Law Enforcement and Water Regulation and Zoning. I recommend that you distribute copies to law enforcement and fish management personnel and to District and Area Water Regulation and Zoning staff. Local highway officials should obtain copies through the appropriate organization (County Board Assoc., League of Municipalities, etc.). Requests for additional copies of the rule for Department staff or for citizens should be forwarded to the Bureau of Water Regulation and Zoning. The following is a discussion of key requirements in the rule and our responsibilities to administer and enforce it.

1. Introduction: Chapter Trans 207 is an unusual rule in that it was adopted by one state agency (the Department of Transportation) and will be administered almost exclusively by another state agency (the Department of Natural Resources). The rule was adopted in this manner because of the requirements contained in sections 30.123 and 84.01(23), Statutes, which were created by Chapter 190, Laws of 1977. While this arrangement appears awkward at first, I believe that we will find it is workable once we gain some experience with it. Most importantly the rule does enable Department field staff, through diligence, to protect against significant adverse impacts on fish and game habitat, wetlands and public navigation.

2. Coverage: Trans 207 applies to all bridges, arches, and culverts constructed in and over navigable streams by counties, towns cities, and villages, where the construction is under the control of the municipality and does not utilize state or federal aids. The rule does not apply to projects of the Department of Transportation or to those local projects which are funded and administered through DOT. Such projects are, as you know, covered under the interagency liaison agreement and are dealt with according to section 30.12(4), Statutes.

We will apply the requirements of Trans 207 to municipal bridge projects which (1) were not under construction on July 1, 1981, or (2) which were not planned prior to July 1, 1981, for completion after that date. This means that we will apply Trans 207 only to projects which are planned and constructed after July 1, 1981.

Section 30.123, Statutes (not Trans 207) exempts municipalities from permit requirements for bridges under sections 30.10, 30.12, and 31.23. Section 30.19, as you know, already contains an exemption for the construction or repair of public highways. Therefore, municipal bridge construction is still subject to the requirements of sections 30.11, 30.195,
and 30.20, Statutes. It is unlikely that the provisions of any portion of Chapter 31 other than section 31.23 would be applicable to municipal bridges.

It is also important to recognize that the statutory exemption from permit requirements and associated requirements to follow Trans 207 only apply to the construction of bridges, arches, and culverts over navigable streams. This means that the construction of roadways not associated with bridges, arches, or culverts, and the construction of bridges, arches, culverts or causeways over lakes and flowages are not exempt from any of the Chapter 30-31 permit requirements. The key factor differentiating between crossings of "lakes" and "streams" is whether the crossing is installed in an area of still water (lake or flowage) or moving water (stream).

As far as road embankments and fills are concerned, the rule applies to these features within the 100-year floodplain if they are associated with an actual crossing of a stream. The rule does not apply in other situations.

We would not consider a roadway along the edge of a body of water to be a crossing within the meaning of Trans 207. Such a roadway would require Chapter 30 permits or approvals if it extended onto the bed of the waterway.

3. Procedures: The processing of requests for review of municipal bridges should be handled by the same staff that are now involved in the review of Department of Transportation bridge projects. Procedures are presently included in Manual Code 1621.2; a revision of M.C. 1621.2 will be initiated soon. With this in mind, the following specific comments are made on procedural requirements:

a. A municipality may ask for information regarding resource concerns and jurisdictional limits at any time. While we would certainly encourage such requests before initial plans are developed, we should consider the submittal of a conceptual plan as a formal request by the municipality for our comments in these areas.

b. The rule provides for the development and submittal to the Department of a "conceptual plan" by the municipality. In the case of "minor replacements" (these will be most of the small culvert replacement projects), the conceptual plan need only contain enough information to demonstrate that the project meets the definition of minor replacement in the rule. This information should prove adequate for us to make necessary evaluations. For other projects, the conceptual plan requirements are more stringent and may require a technical review by engineers in the Bureau of Water Regulation and Zoning. The rule allows the Department to waive any or all of the conceptual plan requirements if adequate earlier coordination with the municipality has taken place.

c. Once a conceptual plan has been submitted to the Department, we have thirty days (with a possibility of a ten day extension) in which to review the plan. We should consider that the time period only begins when we have determined that the conceptual plan is adequate. If we receive a conceptual plan that does not meet the requirements of Trans 207, we should notify the municipality of the additional information requirements and of our determination that the review period has not yet begun. If a field inspection is made (I encourage these for projects other than minor replacements), the results of that inspection should be documented on the field investigation report (form 3500-23).
d. For projects other than minor replacements, the municipality is required to issue a Class I legal notice describing the proposed project. The rule, however, does not provide for a public hearing as a result of that notice. Therefore, citizens will only have the opportunity for a hearing provided under other statutes and cannot rely on Trans 207 in that way.

e. We will transmit our comments on each conceptual plan to the municipality. If we have no comments, we should still advise the municipality of this. We may receive requests from citizens to hold a contested case hearing under s. 227.064 on a proposed bridge. Because our review and comment is not a formal decision and because the municipality may simply proceed to construct based on our comments, the s. 227.064 hearing approach is not appropriate for municipal bridge projects. The Legislature, by eliminating most permit requirements for these bridges, has made it clear that our usual process, including public involvement, does not apply under Trans 207. Individuals wishing to contest these projects should initiate a civil action against the municipality or join in any enforcement action begun by the Department.

f. Record of notifications: Trans 207 requires that the Department maintain records of all notifications received. This would include early coordination which resolves issues regarding a proposed bridge crossing, the submittal of conceptual plans by the municipality, and any legal notice issued by a municipality (this is required for most projects other than minor replacements). We are required to maintain this list and to make it available to the public on request. Attached, for your use, is a sample log form which could be photocopied on a monthly basis and mailed to individuals requesting notification. Trans 207 does not require us to send other types of material to the public on request and our normal procedures relating to public records requests would apply in those situations. The Bureau of Water Regulation and Zoning will be auditing these notifications on an annual basis in order to evaluate municipal compliance with Trans 207. Your records are vital to help ensure this compliance with the law.

g. Enforcement: The Department has authority under a variety of statutes to seek enforcement of violations of Trans 207 and the underlying statutes. Any violation of Trans 207 itself is ultimately a violation of section 30.123, Statutes and, therefore, can be prosecuted under section 30.03. In addition, we continue to have enforcement authority under section 30.15, Statutes, to seek abatement of obstructions to navigation. Unnecessary siltation or pollution from municipal bridge construction could be enforced in the same manner as other sources of siltation, probably through subsection 29.29(3), Statutes. An additional type of "enforcement" which is available is the requirement of section 81.38(5), Statutes, that bridges conform to the standards of Trans 207 or else county cost sharing aids will not be available. While this is not an enforcement device as such, it does provide an incentive for the local officials (primarily town officials) to comply with the requirements.

We may have to make extensive use of section 30.03 in following up on violations of Trans 207 because of local prosecutorial resistance. A brief listing of requirements which municipalities must comply with under the rule follows later in this memorandum.

While we would probably not be directly involved, many violations of Trans 207 would also be Section 10 or Section 404 violations and we should seek enforcement
by the Corps of Engineers where significant resource damage could occur.

h. Emergencies: Earlier versions of Trans 207 contained specific language allowing municipalities to proceed with reconstruction during emergencies and to provide notification after the fact to the Department. The published version of the rule does not contain such an emergency provision. However, we should be mindful of the obligations of municipal authorities to maintain an adequate transportation system and should make every reasonable effort to accommodate their needs when unforeseen damage to bridges creates unsafe conditions. Most of these situations would probably be minor replacements and we should be able to expedite the review in these cases.

i. Environmental Impact Requirements: Department actions under Trans 207 are not specifically listed in Chapter NR 150, Wisconsin Administrative Code. However, since private bridge and culvert construction is a Type III action (see NR 150.03(3)(d)17), we should likewise consider our actions under Trans 207 to be Type III.

j. Water Quality Certification: Municipal highway projects are not exempt from water quality certification or from Chapter NR 299, Wisconsin Administrative Code. Because there is no requirement for a formal public notice by the Department under Trans 207, we will not ordinarily issue a public notice on our intention to waive or grant water quality certification. Instead, the appropriate wording from Chapter NR 299 will be inserted into the Corps of Engineers section 404 permit notice. In cases where we intend to deny water quality certification, we will issue the required public notice under Chapter NR 299.

k. Department Wetland Policy (Section NR 1.95, Wisconsin Administrative Code): Because Chapter Trans 207 gives us a wide variety of environmental concerns which can be used to influence the manner in which municipal bridges will be constructed, we can use the concepts of section NR 1.95 in our dealings with municipalities. However, because we will usually have no direct permit authority over the municipalities, it is uncertain whether NR 1.95 could be used as the basis of legal action against a municipality that chooses to proceed contrary to our recommendations. Field staff should consult the Bureau of Water Regulation and Zoning and the Bureau of Legal Services prior to using NR 1.95 as the primary basis for taking an enforcement action against a municipality.

4. Summary of Requirements for Municipalities under Chapter Trans 207: The following is a brief listing of requirements that municipalities must meet under Chapter Trans 207. This list is probably not all-inclusive but does contain most of the important standards which could be the basis of an enforcement action.

a. Trans 207.01 Purpose: The "purpose" section shows the intentions of the agency which developed the rule and, therefore, should influence the interpretation of other standards included in the rule. The "purpose" section of Trans 207 contains a number of statements regarding the limitations on "constructing authorities" (the local units of government which are covered by this rule). For example, Trans 207.01(6) states that new and replacement bridges "shall minimize alteration of critical features of water habitats."

b. Trans 207.03(1): Constructing authorities are required to certify compliance with the
requirements of Chapter Trans 207 prior to executing construction contracts or work orders.

c. Trans 207.05, Requirements of a conceptual plan: Municipalities must provide conceptual plans which meet the requirements of this section. For "minor replacements," the plan requirements are spelled out in Trans 207.05(1) and amplified by the definition of "minor replacement" in Trans 207.04(10). The requirements for other bridge projects are spelled out in Trans 207.05(2).

d. Trans 207.06, Required navigational clearance: Municipal bridges must meet the same requirements as private bridges under Chapter NR 320, Wisconsin Administrative Code.

e. Trans 207.07, Flood flow requirements: Municipal bridges must comply with Chapter NR 116, Wisconsin Administrative Code, and with any applicable local floodplain or other zoning ordinance.

f. Trans 207.08, Waterway alterations: The rule states that permits would still be necessary for stream straightening and dredging activities under sections 30.195 and 30.20, Statutes. An exception is made for minor excavation in the stream bed in order to place structural elements.

g. Trans 207.09, Erosion control: This section contains a variety of erosion control measures which are required for municipal bridge construction. The extent of these measures varies depending on whether they are to be placed within the "active stream erosion zone" or outside of that area. The rule specifically references the Department of Transportation "Green Book" (the "Standard Specifications for Road and Bridge Construction"). In addition, the rule contains requirements for embankment slopes and erosion control measures such as vegetative cover and riprap. This section also makes specific references to road overflow sections and to roadside and cross-road drainage ditches.

h. Trans 207.10, Construction methods: General requirements are included here on temporary navigation clearance, temporary water opening to convey flood flow, temporary erosion control, timing of construction to avoid adverse environmental effects, the removal of old structures no longer used for highway purposes, and the excavation and disposal of unsuitable embankment and foundation material. Please note that in the case of disposal of embankment or demolition material the requirement for one time solid waste disposal approval would still hold since it is not excluded by either Trans 207 or the basic statutes.

i. Trans 207.11, Notification to Department of Natural Resources: Municipalities are required to provide adequate notice to the Department on proposed projects. As indicated before, there is no emergency provision allowing construction to proceed without notification. The most critical part of the rule is the requirement in Trans 207.11(2) that if the Department notes "environmental concerns," "constructing authorities shall examine such concerns and act in such a manner as to prevent undue impairment of public rights in navigable waters." This is the primary standard in the rule on which to base any enforcement action as a result of environmental damage (as opposed to specific violations other Trans 207 standards). We should consider the threshold at which "undue impairment of public rights" occurs to be the same threshold that we would apply to "violation of public rights," "injury to public rights," or
"detrimental to the public interest" which are criteria found in other statutes in Chapters 30 and 31. You should recognize that this standard contains no statement about balancing the public benefit from the proposed waterway crossing against the likely harm to public rights that would result. This type of balancing test is not in the rule because the basic statute, setting up the bridge standards, section 84.01(23), does not contain such a test.

j. Trans 207.12, Public notices: This section contains a requirement that a Class I legal notice be published by the municipality for new bridges and certain replacement bridges. Notice is not required for minor replacements.

5. Effect of Chapter Trans 207 on Other Regulations: As noted above, the basic statute (section 30.123) eliminates the requirement for permits for municipal bridges under sections 30.10, 30.12 and 31.23. Neither the basic statutes nor Chapter Trans 207 eliminate any other permit requirements at the state, federal, or local level. Therefore, municipal bridges must comply with applicable local zoning and must meet Department of the Army Section 10 and Section 404 and U.S. Coast Guard permit requirements. Also, as noted above, the requirement for water quality certification is still in effect. This may be particularly helpful in situations where a municipality refuses to accept our recommendations and intends to proceed in a manner that will adversely affect water quality.

6. Role of the Wisconsin Department of Transportation: As stated previously, while DOT was primarily responsible for development of Chapter Trans 207, it will not be directly involved in enforcement or other procedures under the rule. The only direct reference to DOT in the rule is a statement that copies of the standard specifications for highway construction are available at DOT offices. However, we will expect support form DOT if municipalities show a pattern of failure to comply with the rule. In particular, if modifications of Trans 207 become necessary, we would have to accomplish these changes through DOT. It is vital that field staff document through narratives and photographs local noncompliance with the regulations. It should also be pointed out that DOT is the respondent in the current law suit regarding Trans 207 which was filed by the Public Intervenor and Trout Unlimited.

7. Publicity on Trans 207 Requirements: The Bureau of Water Regulation and Zoning will take the lead in developing appropriate public information on Trans 207. Information on the rule has been published in a recent newsletter of the Wisconsin County Boards Association. The Bureau will develop letters to be sent to the County Boards Association, county and local zoning officials, the Wisconsin Towns Association, the Alliance of Cities, and the League of Municipalities. Furthermore, the Bureau will develop a news release for use by District staff to inform the public.

8. Summary: As you can tell from this lengthy memorandum, there are a number of requirements which all of us should become familiar with so that we can properly and effectively administer Trans 207. While most 1981 municipal highway bridge projects have been planned prior to the effective date of the rule, we can expect a substantial number of requests for review of conceptual plans for projects to be constructed during 1982. We should make every effort to cooperate with the various municipalities to make this rule work to protect public rights in navigable waters while preventing unnecessary delay in bridge construction due to lengthy permit processes. We have made it clear that the municipalities have the opportunity to show that they can act responsibly without a formal permit system. We will make every reasonable effort to assist them to do so.
Please inform all law enforcement, water regulation and zoning, fish management, and wildlife personnel of these requirements. Questions about our administration of Chapter Trans 207 should be referred to Bob Roden at 608-266-8034.

GEM:RWR:SLE
Attach.

cc: C. D. Besadny - ADM/5
    Andrew Damon - ADM/5
    Linda Bochert - ADM/5
    Division Administrators
    Jim Kurtz - LEG/5
    Stan Druckenmiller - EI/3
    Bob Baker - Department of Transportation
    R. Roden, L. Larson, R. Knitter - WRZ/5

0804I

[Municipal Bridge Log Sheet Appeared Here]
TO: District Directors  
   Ed Brick - WRZ/5  
   Dick Knitter - WRZ/5  
   Larry Larson - WRZ/5  

FROM: Robert Roden - WRZ/5  

SUBJECT: Program Guidance, Chapter Trans 207, Wis. Adm. Code  

Several questions have arisen regarding procedures under Chapter Trans 207, Wis. Adm. Code. This memo is meant to augment or capsulize George Meyer's memo on the subject dated September 11, 1981.

A brief summary of the situation leading to the questions is provided for informational purposes. The City of Milwaukee proposes to replace the 11th St. swing bridge over the Burnham Canal with a stationary bridge. The project is not a DOT activity under s. 30.12(4), Stats. The Burnham Canal is an enlargement of the Menomonee River about a mile upstream of its mouth at Lark Michigan. The Southeast District office has been contacted by the attorney of upstream owner who complains that the replacement bridge will severely affect his client's shipping capability. The owner's current shipping practice requires rotation of the swing bridge to allow passage of vessels. The proposed replacement bridge would have the same clearance as the swing bridge in the closed position, but that clearance would be inadequate for the upstream owner.

Question 1. Does Trans 207 apply to this situation?
   Since the canal is an enlargement of a stream, it should be considered part of the stream and Trans 207 requirements would apply.

Question 2. What authority would we have if Trans 207 did not apply?
   If the canal was not considered part of the stream, Trans 207 would not apply. Permits or approvals would be required. The exemption from permits under s. 30.123, Stats., is conditioned upon compliance with standards developed pursuant to s. 84.01(23), Stats., and the standards (Trans 207) were developed only for stream crossings. This position is further supported by the language of s. 30.10(4)(a), Stats., "This section does not impair the powers granted by law under s. 30.123 or by other law to municipalities to construct highway bridges, arches or culverts over streams."

Question 3. If a municipality falls to comply with Trans 207, for stream crossing, can we require that they apply for permits?
   The exemption from permits under s. 30.123, Stats., would still apply. Although we could not require permits, we could initiate enforcement actions to secure compliance with Trans 207 requirements, which is mandated by s. 30.123, Stats.

Question 4. When can we initiate enforcement actions? What mechanisms are available for enforcement?
While the following enforcement procedures may be initiated by DNR, as appropriate, it is suggested that municipalities be given the opportunity to take corrective action voluntarily prior to initiating an enforcement action.

If in the review process under Trans 207. 11 we have sufficient reason to conclude that the proposal will not conform to the requirements of the rule, and we are unable to resolve the problem with the municipality, we may immediately initiate enforcement proceedings under s. 30.03, Stats., even before construction has begun. For the case described, failure of the municipality to provide adequate navigational clearance would violate the provisions of Trans 207.06 and hence would be a violation of s. 30.123, Stats. (See Trans 207.13 and the note following it.)

If in the course of construction the municipality fails to comply with the requirements of Trans 207 or violates some other provision of law, appropriate enforcement actions may be initiated under ss. 29.29(3) or 30.03, Stats.

If immediate action is necessary to prevent "undue impairment of public rights," we may ask the Department of Justice or the District Attorney to seek a temporary restraining order halting the project.

If we become aware of construction which has proceeded where the municipality failed to notify us pursuant to Tans 207. 11, and the requirements of the rule have not been met, enforcement actions may be initiated pursuant to ss. 30.03 or 30.15, Stats. Generally, such enforcement actions should only be considered if the project has adversely affected public rights or interests, or if the municipality has consistently failed to meet the procedural requirements of Trans 207.

Question 5. Trans 207 requires the municipality to publish a public notice under certain circumstances. When should the notice be published and what information should it contain?

Although the public notice can come out at any time, it would be preferable that the notice be issued after Department concurrence on the conceptual plan for the structure. Hopefully, any potential problems with a structure should be worked out between the municipality and the Department prior to public notice.

Trans 207.12(l) requires publication of a Class I legal notice "if the proposed structure is a new structure, or will be a reduction of existing navigation clearance, or is a replacement of an existing structure which is in itself the limiting obstruction. " It further requires that public notices be posted in "conspicuous locations in the locality of the proposed structure. " There are no provisions for public hearing in response to the notice. Although we probably can't require it, we should suggest to the municipality that a basic description of the proposed project be provided and that riparian owners who might be affected receive a copy of the notice.

Question 6. Trans 207.03 requires a certification that design and construction of a structure will comply with the requirements of the rule. Who does the certification go to and what value does it have?

The rule does not specify that the certification should be provided to anyone. However, the "Order Adopting Rule" which was sent by Bob Roden to all District WMC's may provide some additional guidance. Item number 2 of the D.O.T. analysis says that "Certification of adherence to the rules is to be provided by the constructing authority. " The fiscal estimate indicates that the effect of the rule is to "shift responsibility from a permitting procedure to a compliance certification..." These two statement would seem to imply that the certifications should be provided to the DNR. However, requiring certifications from municipalities who normally meet
Trans 207 requirements may prove to be an irritant which might jeopardize otherwise good working relationships. It is recommended that we request the certifications only where we feel that Trans 207 requirements are not being met. We should remind all municipalities of the certification requirement, however, to assist them in complying with Trans 207.

Since the certification procedure was adopted to eliminate the need for municipalities to secure permits for stream crossings, presumably the certification procedure is a means of evaluating whether municipalities are acting in a responsible manner. If Trans 207 procedures are not adequately protecting public rights or interests it may be necessary for the DNR to seek more effective controls.

RR:BS:JKB

cc:  George Meyer - ADM/5  
    Jim Chizek - LE/5  
    Mike Cain - LEG/5  

2047H
DNR Policy Regarding Existing Bridges and Culverts Upon Abandonment of a Railroad Line

Attached is a letter from George E. Meyer to Frank Tippy of the Chicago and Northwestern Transportation Company. The letter sets forth our policy regarding existing bridges and culverts upon abandonment of a railroad line. This subject is discussed in Chapter 80, the bridge chapter of the Water Regulation Handbook with regard to authority for construction of bridges.

Reviewed By: Michael Cain
            Scott Hausmann
            Dan Holzman

EB:msg/0601D

Attach.
Mr. Frank Tippy  
Chicago and Northwestern Transportation Company  
165 N. Canal Street  
Chicago, IL 60606

Dear Mr. Tippy:

You have asked for and explanation of the Department's policy regarding existing bridges and culverts upon abandonment of a railroad line. It is our position that the law requires that the present owner remove bridges and culverts across navigable waters or that the future owner secure authority from the Department to maintain those structures.

While the original franchise issued by the Legislature for railroad construction did authorize the bridges and culverts, when a railroad abandons a line, authority to maintain the line and the structure ceases. At that point in time, the bridges and culverts must either be removed or reauthorized. The Department may reauthorize bridges or culverts through issuance of appropriate permits or approvals to the future owner of the lands comprising the former railroad right-of-way. We feel that the final disposition of the structures must be addressed prior to approval of a railroad abandonment. In some cases a future railroad right-of-way owner may not wish to maintain a structure or be able to obtain the appropriate permit or approval. In those situations we believe it is the railroad's responsibility to remove the structures.

Even before railroads were constructed in Wisconsin, the statutes and common law prohibited obstructions over navigable waters unless authorized by the Legislature. Currently, unauthorized bridges and culverts are prohibited by ss. 30.10, 30.12, 30.15 and 31.23, Wis. Stats., and their maintenance may be abated through legal action under the appropriate statute or s. 31.25 (copies attached).

You or other members of the Chicago and Northwestern Transportation Company may feel free to contact me for any further clarification or explanation of this policy. In the meantime, I hope that you will continue to cooperate with our field staff in their dealings with you on current abandonment proceedings.

Sincerely,
Division of Enforcement

George E. Meyer  
Administrator

cc: John Brasch - Rhinelander  
    James Kurtz - LEG/5  
    Robert W. Roden - WRZ/5  
    Howard Druckenmiller - El/3  
    D. K. Tyler - Woodruff  
    Jim Smith - DOT  

24221
SUBJECT: Program Guidance - Water Quality Certification for Department of Transportation Highway and Bridge Projects

I recently became aware that program staff have been routinely waiving the right to certify that Department of Transportation bridge and highway projects are in compliance with the requirements of section 401a of the Clean Water Act.

Subsection NR 299.01(2)(c) states that a waiver of certification is only appropriate where there is no discharge into waters of the state or where an activity is not within the purview of the Department's authority. Because sections 30.12(4), 84.11(7) and 84.12(7), Stats., clearly specify that the Department has authority which can be exercised in relation to DOT highway and bridge projects, a waiver of water quality certification should only occur when there is no discharge to waters of the state.

Proper action on water quality certification requests for DOT projects is therefore limited to the following:

1. Grant of water quality certification: project meets substantive requirements of NR 299.05(l)(b) with no conditions necessary.

2. Conditional grant of certification: project meets substantive requirements of NR 299.05(l)(b) if conditions agreed to in the liaison process are met.

3. Denial of certification: project does not meet substantive requirements of NR 299.05(l)(b) because satisfactory agreement could not be reached with DOT in the liaison process.

4. Waiver of right to certify: project does not involve discharge into waters of the state.

You should note that subsection NR 299.05(l)(b)7 refers to "any other appropriate requirements of state law as provided in 33 U.S.C. s. 1341(d)". For our purposes, you should consider the full range of substantive laws and regulations referenced in section 30.12(4)(a) as "other appropriate requirements of state law" under this subsection where DOT projects are involved. Please note that DOT is exempt from complying with local shoreland-wetland zoning provided the liaison process is satisfactorily completed.

However, you should also keep in mind that these issues should have been dealt with during the liaison process and that new concerns should not ordinarily be raised under 401 certification. Instead, 401 certification should be looked on as a formalization of agreements reached under the DNR-DOT Cooperative Agreement.

Since section 30.12(4) provides different procedures to be followed from those specified in the referenced statutes, no public notice is required under ch. NR 299 and the appropriate language regarding water quality
certification should instead be included in the public notice issued by the Corps of Engineers.

Reviewed By:
    George Meyer
    Jim Kurtz
    Stan Druckenmiller

RYirR:sm

c: Kathy Curtner - ADM/5
   Lyman Wible - ADM/5
   Bruce Baker - WRM/2
   Jim Kurtz - LEG/5
   Stan Druckenmiller - EI/3
   Mike Cain - LEG/5
   Scott Hausmann - WRZ/5
   Larry Larson - WRZ/5

4903K
You have asked how do we account for the needs of downstream wastewater dischargers when evaluating a diversion permit.

Section 30.18(4)(a) established the department's noticing requirements for diversions authorized pursuant to section 30.18(2) in conjunction with the requirements of section 31.06. These noticing requirements are essentially the same as before with exception to the addition of persons specified in 144.026(5)(b) or (6)(f), if applicable.

Pursuant to the provisions of section 30.18(5)(a) the department shall approve an application for a permit required under sub. (2)(a) if the department determines both of the following:

1. That the proposed diversion will not injure any public rights in navigable waters.

2. That the water to be diverted is surplus water; or it is is not surplus water that all riparians who may be adversely affected by the diversion have consented to the proposed diversion.

Because this section requires the department to determine whether or not items I and 2 are complied with, then we must make a determination whether or not the water being diverted is surplus or nonsurplus and make a determination as to whether or not riparians may be adversely affected.

Our determination of surplus vs. nonsurplus water in conjunction with a public interest stage should consider existing WPDES permit holders and the flow requirements upon which their minimum discharge standards are established. It is likely that other instream flow concerns such as fish habitat, navigation, recreation, etc., will, more often than not, have a higher minimum flow requirement to prevent injury to public rights than the minimum flow requirement for effluent limitations. You should also note that the quality of water for public use is considered a public right. WPDES permit holders are considered beneficial users of a stream and would have to consent to a diversion if nonsurplus water would be diverted.

We should follow similar procedures as we have in the past.
PMMS Response
Insertion: Chapters 80 & 150 Water Regulation Handbook

FROM: Scott Hausmann - WZ/6
Distribution: WRZ Program Staff

SUBJECT: Removal of Unauthorized Structures

We have been asked questions regarding removal of unauthorized structures for the following two scenarios:

1. A private driveway bridge which has a significant backwater effect to a lake was constructed in the 1960's without any record of authorization.

   Q: Can the Department order upsizing of the bridge's conveyance capacity using NR 320.07(l) Standards?

   A: Past practice up to 1974 was that even though many bridges were constructed in apparent violation of the statutes, the Department and its predecessor agencies usually took enforcement action only on bridges which were believed to obstruct navigation. With the establishment of NR 320 in 1976 the Department was required to commence an enforcement investigation upon receipt of a written complaint for any private bridge in existence on January 1, 1977 which has not received a necessary permit or approval.

   After such investigation, the Department shall, if it finds that the bridge causes environmental damage, floodflow or navigational problems, seek voluntary compliance in modifying the bridge through a written request. If the owner fails to bring the bridge into compliance, the Department shall then commence an enforcement action.

   Consideration should be given to the issuance of an order to upgrade the bridge's conveyance capacity only if a strong case can be made that the backwater caused by the bridge is an obstruction to navigation or is causing environmental damage. Considerable weight should also be given to the amount of time that has elapsed without complaints being filed or enforcement actions by the Department.

2. Unauthorized dams were constructed on Milwaukee River tributaries at some unknown time in the past. Fish management has identified that they are having a negative water quality and fish habitat effect. Through the Milwaukee River Program they have identified removal of the dams as a key management strategy for the particular stream.

   Q: What mechanisms should be used to obtain their removal?

   A: Initial steps which should be taken in this matter should consist of, a) Attempt to determine ownership; b) Research the original authorization or lack thereof, and c) Seek voluntary removal or modification of structure.

   If this doesn't work then we can follow procedures identified under s. 31.253 Wis. Stats. These procedures involve conducting a public informational hearing or publishing a Class 2 notice stating we
will seek or cause removal of the dam without a public informational hearing if one is not requested within 30 days. Upon completion of the public informational hearing or 30 day notice period as the case may be, an order may be issued for removal of the dam. Such order shall include appeal rights and if so appealed may result in the need for a contested case hearing pursuant to s. 227.42 Wis. Stats. If the owner does not comply with the removal order, citations may be issued and the matter further pursued through the local District Attorneys office. If cooperation and compliance cannot be obtained through the District Attorney's office, it may be necessary to refer the matter to the Attorney General's office for enforcement under s. 30.03 Wis. Stats.

If we can't find an owner, we can use 31.187 for abandoned dams.

Drafted By: John Coke

Requested By- Vic Pappas - SED

Reviewed BY: Mike Cain - LC-5

JC:EB:js
88071
DATE: December 9, 1988  IN REPLY REFER TO: 3550

TO: District Directors (WMC)

PMMS Response
Insertion: Ch.3-Floodplain/Shoreland Guidebook
Ch. 80-Water Regulation Handbook

FROM: Bob Roden - WZ/6

Distribution: WRZ Program Staff
County Zoning Administrators
Municipal Zoning Administrators

SUBJECT: Analysis of Projects in the Floodway

This guidance applies to any encroachment into a floodway, including Ch 30 permit actions and all state and local highway projects. It resulted from recent discussions with Water Regulation and Zoning Program staff, and recent amendments to the DOT/DNR Cooperative Agreement. The following questions have been raised:

Question #1. Should projects be analyzed for compliance with Wis. Adm. Code NR 116 by the equal degree or by the single degree methodology?

Answer: The February 1986 version of NR 116 requires that all proposed projects in the floodway must be analyzed based on the obstruction to floodflow caused by the project (single degree of hydraulic encroachment). The threshold for further action based on the analysis of the project is 0.01 foot increase in the 100 year profile.

However, many local floodplain ordinances still refer to the previous version of NR 116 which required the "equal degree" methodology and the threshold of 0.1 feet. If the local ordinance has not been updated to comply with the current standards in NR 116, analysis of proposed projects in the floodway must be done in accordance with the local ordinance.

Equal Degree Methodology

An obstruction proposed in the floodway must be analyzed so that all property owners within a hydraulic reach, on both sides of the river, have the same opportunity to develop. This "equal right of encroachment" is the basis for the original concept of the equal degree methodology. A "hydraulic reach" is defined in the 1977 version of NR 116 as a "significant change in the hydraulic character of the river". It is not simply the distance between two cross sections.

Proposed bridge projects are the most difficult kinds of projects to be analyzed by the equal degree concept. It becomes even more difficult to consistently apply this methodology r replacement bridge structures. This is especially true when the obstruction caused by the existing structure (because of the approach grades) may not be altered significantly y replacing the structure itself.

For bridge structures the equal degree concept is correctly applied by a percent conveyance reduction on each side of the stream that will "represent' the new approach grade and bridge structure together. This should be applied for each cross section in the analysis for a "hydraulic
reach". If the results of this analysis is equal to or greater than 0.1 feet, amendments to the local ordinances will be required and legal arrangements must be obtained from all affected property owners.

Single Degree Methodology

For communities with updated ordinances (1986 version of NR 116) the single degree methodology is appropriate. This methodology is a comparatively simple process because only the actual physical obstruction or additional obstruction (in the case of replacement structures) will be represented on the cross sectional data input. If the analysis determines that the proposed project will cause an increase in floodstage equal to or greater than 0.01 feet, the local ordinance must be amended after legal arrangements have been obtained from all affected property owners. Before this approach can be used in analyzing proposed projects in the floodway the community ordinance must reflect the current standards in NR 116.

Question #2. When are hydraulic and hydrologic calculations necessary for an amendment to local ordinances?

Answer: Calculations are necessary when a project will cause an obstruction to flood flows. The following apply to various "mapped/studied" floodplain areas:

1. Mapped and studied floodplain: An analysis must be done because the area is fully regulated by a zoning ordinance. If the proposed project causes an increase to the adopted flood profile, legal arrangements and an amendment to the local ordinance are necessary.

2. Mapped but not studied floodplain: An analysis of the project must be performed as outlined above. We will require an amendment to the zoning ordinance to recognize the calculated floodplain elevations (proposed). If the project will cause an increase to the regional flood profile, legal arrangements must be obtained from all property owners, before an amendment can be approved.

3. Unmapped but studied floodplain: We should treat these the same as mapped and studied areas. A new analysis should be done so that the correct data can be mapped and then provided to the community. Construction can proceed before the community adopts the data.

Question #3. What is DNR policy for situations where the calculated flood elevation for proposed projects does not match published (adopted) detailed studies?

Answer: The starting point for analysis of projects must be the adopted study. If an analysis for a proposed project for the existing (pre-project) condition does not match the adopted 100-year flood elevation for existing conditions, then the new analysis must be approved by DNR. If this is not done, there may be an inconsistency in how the local ordinance is administered because different standards of technical sufficiency for analyses may have been applied.

Often a case by case analysis for a proposed project will be done long after completion of the adopted floodplain study for a particular community. If the results of the analysis do not match the study, then the adopted floodplain study should be considered for revision. However, the analysis of proposed projects must be done to the same level of accuracy as the adopted study for a valid comparison. For example, if the HEC-2 computer program has been used in the adopted study, then the analysis of the proposed project must be done using the original study data in HEC-2 format. If the hydrologic analysis for the estimate of peak discharge is different from that of the adopted study, then the entire study throughout the community is in question. The only valid method to determine the most accurate study is for the new analysis to be done as thoroughly as
the original study. An example is where the "adopted" peak discharge had been analyzed on a watershed basis and applied to the study for the community. In this case the new analysis must be done on a watershed basis as opposed to estimates developed for one site only. The importance of this issue is reflected in the requirement that information submitted for the analysis will be transmitted to the community by the DNR for amendment to the local ordinance.

Related Guidance: February 1, 1982 "Chapter 30/31 Permit Actions"

Requested By: Mark Riebau - WZ/6

Drafted By: Bob Watson - WZ/6

Reviewed By:

Mark Riebau - WZ/6
Larry Larson - WZ/6
GUIDANCE PURPOSE AND DISCLAIMER

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance cannot be relied upon and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes, common law and administrative rules to the relevant facts.

This file is an electronic version of a chapter of the Waterway and Wetland Handbook. This document was scanned from the master handbook chapter kept at the Bureau of Fisheries and Habitat Protection central office in Madison. All effort was made to ensure this scanned electronic copy is an actual copy of the hardcopy document. Due to the electronic scanning process, there may be rare instances of typographical errors, omissions or improperly formatted pages. Please refer to the master handbook if accurate transcription is required.

PURPOSE

A fundamental principle in Wisconsin is that navigable waters are common highways and should remain forever free for public use. Various rules and statutes now regulate the construction of culverts in navigable waters. The regulations allow the Department to control the degree of obstruction to navigation, to minimize their potential obstruction to flows, to minimize erosion, sedimentation and washout potential, and to control other adverse environmental effects.

MECHANISM

Culvert waterway crossings are reviewed or approved in accordance with several sections of the statutes.

Section 30.12, Wis. Stats., requires a structure permit for private and municipal non-highway culvert waterway crossings. The structure permit authorizes placement of a culvert(s) and fill necessary to construct a roadway.

Section 30.12(4), Wis. Stats., exempts highway and bridge activities conducted under the direction and supervision of the Department of Transportation from prohibitions or permit and approval requirements of various statutes. Such activities must, however, be performed in accordance with inter-Departmental liaison procedures or the exemption does not apply (see the copy of the Cooperative Agreement between DOT and DNR date 10-25-76 attached to Chapter 80 of the Handbook).

Sections 30.10 and 30.123, Wis. Stats., exempt municipal highway bridges, arches or culverts from permits or approvals under ss. 30.10, 30.12, or 31.23. However, all municipal highway bridges, arches or culverts shall be constructed according to the standards of Trans 207, Wis. Adm. Code, or the municipality is subject to enforcement action. The definition of 'municipal highway bridge' contained in Chapter NR 320.03(6) should be applied. Conceptual plans for municipal highway projects are to be submitted to the Department for evaluation and recommendations regarding clearance, flood flow capacity and erosion control. Permits or approvals under ss. 30.11, 30.195, or 30.20 would still be required if appropriate. Minor waterway modification needed to place or construct the bridge arch or culvert do not require permits. Temporary roads, access roads or cofferdams...
needed for completion of the project would not require a separate permit since they are considered to be necessary to complete the highway construction.

Section 30.122, Wis. Stats., provides that structures constructed prior to December 9, 1977, which did not require a permit at the time are presumed to be in conformity with the law. This statute applies to culvert waterway crossings since the Department and its predecessor agencies for many years considered these crossings to be bridges which required no permit authority unless they crossed navigable waters at least 35 feet wide, in which case a bridge permit was required. This practice continued until a 1974 Bureau of Legal Services opinion advised that a structure permit pursuant to s. 30.12, Wis. Stats. was the appropriate mechanism to approve culvert waterway crossings. That opinion also indicated that a bridge over a stream required plan approval in order to comply with s. 30.10, Wis. Stats. This statute (s. 30.122) does not legalize older culvert waterway crossings. If such a structure should prove to be an obstruction to navigation, appropriate enforcement action can be initiated.

HISTORY

See Chapter 70 of the handbook which is the general chapter on structures. See Chapter 80 on bridges for additional information.

CULVERT WATERWAY CROSSING STANDARDS

Statutory Standards

Section 30.12, Wis. Stats., contains the following standards:

1. "The Department may ... grant to any riparian owner a permit to build or maintain for the owner's use a structure otherwise prohibited by statute..."

Although this language seems to be only introductory, it does provide us with two elements of legislative direction. The permit applicant must be a riparian owner (or lessee). Presumably, the structure applied for would have to be within his zone of riparian influence or control. Thus, if an owner who owned one half of the stream wanted to construct a culvert waterway crossing he would need to have the owner of the other half of the stream join him in applying for a structure permit. Secondly, a structure may be placed in navigable water purely for private as opposed to public purposes.

2. A permit may be granted "if the structure does not materially obstruct navigation..."

Several factors must be considered in order to evaluate a culvert waterway crossing. If the waterway has a history of use for navigation or is likely to be used for navigation, evaluations should consider:

a. Type of Watercraft: On smaller streams canoes may be the only, or major, type of watercraft used. Canoes generally require less clearance than other watercraft. A small stream may be used by hunters in flat bottom boats which require more horizontal clearance than a canoe. In larger streams and lakes rafts, pontoons or large pleasure boats may have developed a pattern of use.

b. Amount of Use: For a stream or portion of a lake which has very little or no navigation, the alternative of providing portage may very well satisfy the requirement of not materially
obstructing navigation. Where a waterway is used regularly for navigation, a material obstruction to navigation may exist, unless sufficient navigational clearance is provided for the normally used watercraft even though (in the case of a lake) an alternative route is available.

c. Seasonal Navigation: Many streams are used for canoeing or rafting only during periods of high water. While a culvert crossing may seem to be sufficient for navigation at normal water levels, it could be a material obstruction to navigation as well as a safety hazard during high water. For such a case, a bridge, ford or minimum fill culvert installation may be the only acceptable stream crossing.

All three of these factors must be investigated in order to determine if a proposed culvert waterway crossing will or will not materially obstruct navigation.

3. A permit may be granted provided the structure does not "reduce the effective flood flow capacity of a stream..."

When this standard was inserted in the statute, the Public Service Commission's intent was to provide an additional tangible standard to evaluate proposed structures. In subsequent decisions this standard was applied at the discretion of the investigator and was not necessarily established by hydraulic calculation. Currently (10-82), we are attempting to develop a program guidance on what constitutes a reduction in the effective flood flow capacity of a stream.

4. A permit may be granted provided the structure "is not detrimental to the public interest."

The legislature has authorized the placement of structures in navigable waters for private use provided the statutory standards are met. Many factors, including the following must be considered in order to determine if a culvert is detrimental to the public interest:

a. Natural scenic beauty.

b. Potential for interruption of fish or game migration.

c. Adequacy of design including potential for washout (road embankment stability).

d. Environmental effects including potential for excessive erosion and its effects on habitat (spawning areas, etc.).

e. Lack of viable alternatives.

It should be noted that this standard does not require a culvert waterway crossing to be positively in the public interest. The question to resolve when considering a structure application is not "will any adverse effects result" but rather "will any adverse effects resulting from the structure be detrimental to the public interest." A balancing of public and private rights is required to make this determination.

**Administrative Code Standards**

1. **Wetlands.** NR 1.95, Wis. Adm. Code, establishes general standards to be applied by the Department in decisions affecting wetlands. The Department shall consider proposals which require its approval with the presumption that wetlands are not to be adversely impacted or destroyed and that the least overall adverse environmental impact shall result.
2. **Shoreland Zoning.** NR 115, Wis. Adm. Code, establishes administrative standards which must be followed by counties in their administration of shoreland zoning ordinances. These standards shall be reflected in approvals issued pursuant to 30.12, Wis. Stats.

3. **Floodplain Zoning.** NR 116, Wis. Adm. Code, establishes administrative standards which must be followed by local units of government. Permits issued under 30.12, Wis. Stats., should require applicants to conform with these standards.

4. **Regulation of Bridges and Culverts.** NR 320, Wis. Adm. Code, establishes uniform navigation clearance and flood flow standards for bridges, arches or culverts in or over navigable waters. New bridges, arches or culverts must generally provide navigational clearance of 5 feet. More or less clearance may be required or allowed according to the provisions in NR 320.04. Flood flow requirements for culverts are basically those found in NR 116. Plan and informational requirements for permit applications are found in NR 320.06.

5. **Environmental Impact.** NR 150, Wis. Adm. Code, establishes procedures for determining whether a given project requires an environmental impact statement (EIS). Culverts are Type II actions which do not normally require an environmental assessment.

6. **Municipal Highway Bridges.** Trans 207, Wis. Adm. Code, establishes design and construction requirements for municipal highway bridges, arches and culverts and a Department review procedure to be initiated by municipalities. This procedure applies to projects where there is no Department of Transportation involvement.

**Administrative Interpretations**

1. **Railroad Bridges.** Bureau of Legal Services opinions (1-5-73, 1-18-79 and 7-25-79). Railroad corporations are not exempt from bridge or structure permit requirements. According to s. 190.08, Wis. Stats., upon abandonment of a railroad, watercourses must be restored to their former state or to such conditions that their usefulness is not materially impaired. Railroad corporations are required to apply for structure permits for culvert placement or replacement.

2. **County Forest Road Crossing.** Bureau of Water Regulation and Zoning (WR&Z) program guidance (2-10-82). If the forest road is a public highway, Trans 207, Wis. Adm. Code procedures should be followed.

3. **Department responsibilities under Trans 207, Wis. Adm. Code.** Division Administrator program guidance (9-11-80). This is an eight page guidance and should be referred to directly (see copy attached to Chapter 80 of the Handbook).

4. **Program Guidance, Trans 207, Wis. Adm. Code.** Bureau of WRZ guidance (3-16-82). This is a 4 page guidance and should be referred to directly (see copy attached to Chapter 80 of the Handbook).

**PROCESS**

**Application**

Application review includes examination of the application form, plans, the field investigation and hydraulic analysis. Applications with insufficient information to complete any aspect of the review should be returned to the applicant with whatever instructions are necessary to secure needed information.
Plan requirements: In order to properly evaluate a culvert crossing it is necessary to have accurate design and topographic data. For new culvert waterway crossings a hydraulic analysis is required to determine: whether flood plain standards are met; various flood elevations to assist in establishing whether the culvert and fill reduces the effective flood flow capacity of the stream; whether the design is sufficient to prevent excessive streambed erosion; and whether the road embankment is adequate to prevent or minimize the chance of washing out. Plans required to complete application review include:

a. Location map of sufficient detail to allow field staff to properly locate the project area.

b. Plan view (to scale) of project site showing:
   1. Property lines
   2. Location of waterway
   3. Existing buildings, roads or bridges
   4. Location of proposed culvert and roadway

c. Detailed plans of culvert and road fill
   1. Cross-section perpendicular to culvert and parallel to fill showing:
      a. Flood plain cross section. This is required to conduct a hydraulic analysis for a culvert waterway crossing. The cross section must extend to an elevation above the regional flood plain. If the flood plain is relatively uniform in configuration near the project site, one cross section should be sufficient. However, if a natural or man-made constriction exists in the vicinity of the proposed culvert, either upstream or downstream, it (they) would effect stream hydraulics. Cross sections at any constrictions should be provided so that hydraulic analysis can account for their effects.
      b. Proposed road elevations, culvert size and placement
      c. Normal water level and high watermark (if known)
   2. Cross-section parallel to culvert and perpendicular to fill showing:
      a. Bed of waterway
      b. Elevations of the upstream and downstream culvert invert
      c. Embankment slopes and road elevation
      d. Type of culvert inlet (projecting, mitered or headwall)
      e. Length of culvert
   d. Other information necessary to complete hydraulic review include:
      1. Stream slope. Elevation of water surface 1000 feet upstream and 1000 feet downstream as well as at any intervening changes in water surface profile.
2. Photographs of flood plain cross section(s). Photographs are necessary to accurately estimate channel and overbank roughness factors.

NOTE: It is highly desirable that stream slopes and flood plain cross section(s) be surveyed by an engineer, surveyor or government technician in order to accurately analyze a project.

Evaluation of replacement culverts will not require hydraulic analysis if the replacement roadgrade and culvert has water passing capability at least as large as the existing road grade and culvert. Note that this provision applies to culvert waterway crossings that are Legally authorized or "presumed in conformity with the law". Replacement of unauthorized culvert waterway crossings which were initially constructed after we began to apply permit requirements should be evaluated as a new structure and would be subject to the regular flood flow requirement of Chapter NR 116, Wis. Adm. Code.

Notice Requirements

A public notice is required for culvert waterway crossing permit applications. An exception to this requirement might be when department personnel are clearly in opposition, due to nonconformance with statutory standards, in which case a notice of public hearing could be issued since s. 31.06, Wis. Stats., allows this option. In some cases where it is recognized that a hearing will be required it may still be desirable to issue a notice of proposal to solicit public opinion, particularly when the project is suspected to be highly controversial.

Design Considerations

The following section on design considerations is presented to give the project evaluator some basic information on the performance of culvert waterway crossings. Some of the information can be used to make suggestions to permit applicants. The information can also be used when inspecting a completed project as a "check list" to verify that the project was properly constructed.

A. Location: On streams, culverts should be located in such a manner that the least amount of channel obstruction and road embankment fill are required. If, during field investigation, it appears that shifting a proposed culvert a short distance upstream or downstream would lessen the obstruction to flood flows or that modifying the bank (excavating an approach) would minimize fill, make the appropriate recommendation to the applicant or make such requirement a permit condition.

B. Size:

1. Normal Stream Flow: On a stream, a culvert should be large enough to pass normal stream flow without creating any backwater. There are several reasons for this recommendation. Normally there will be little increase in velocity through the culvert so fish migration should not be hindered. A culvert waterway crossing meeting this recommendation would probably be able to handle flood flows without causing excessive backwater elevations. If one culvert has insufficient capacity, two or more culverts might be suggested. If, in addition, the stream channel is too narrow to accommodate more than one culvert, consider enlarging the waterway as required to allow the installation. Appropriate s. 30.19 provisions could be incorporated in the structure permit.

2. Navigational Clearance: The criteria of NR 320 should be followed. A recommendation to increase culvert size for navigation on a stream which has little or no history of navigation may not be necessary. There is no requirement that every stream crossing must provide navigational clearance. In those instances where a stream receives minimal canoeing, for example, requiring
the applicant to provide a portage might be a better solution. Embankment fill could be minimized and perhaps the statutory standards would be met to a greater degree.

C. Installation:

1. On streams it is advisable to suggest or require culverts to be installed with the bottom (invert) of the culvert below the bed of the stream. Depending on the size of the culvert, the invert should be installed 3" to 12" or more below streambed. Installation in this manner may have the following benefits:

   a. Flow capacity may be increased since the head on the upstream side will be increased in relation to the culvert invert.

   b. Less fill may be required over the culvert creating less obstruction to flood flow (easier to be overtopped).

   c. Fish migration and perhaps spawning will be impaired to a lesser degree. During high flows material will probably scour out of a culvert, but as flow diminishes any bed material carried by the stream will tend to settle out in the culvert. During low flows the corrugated bottom of metal culverts might be nearly impossible for fish to swim over but if, for example, sand has settled in the bottom, a narrow channel cut by the flowing water might be deep enough to allow fish migration.

2. Culvert slope can be an important factor insofar as culvert capacity is concerned. A culvert operates either under inlet control or outlet control. For inlet control the pipe size, shape and entrance type (geometry) are the principal factors controlling culvert capacity. For outlet control, culvert capacity is dependent upon pipe length, slope, entrance type (geometry), roughness, size, shape, and tailwater depth. As you can see, if for no other reason than the number of capacity controlling factors, inlet control is more efficient with equal headwater elevations. The operation of a culvert can sometimes be changed from outlet control to inlet control by increasing pipe slope, although for most stream crossings this could be difficult to do. As an example of how pipe slope and roughness relate under outlet control, a corrugated metal pipe with free flow would have to be placed at a slope 4 times steeper than the same size concrete pipe to have the same capacity since the metal pipe has a roughness coefficient 2 times larger than concrete pipe.

D. Culvert Inlet Types: Culverts can be installed with various types of inlets. Corrugated metal pipes may be installed projecting from embankment fill, with a mitered (beveled) end, with a prefabricated steel end section, with a square edge concrete headwall or a rounded edge concrete headwall. Generally, factors which are considered in determining inlet type are:

1. Economy (reduced pipe lengths may offset the use of a particular inlet type)

2. Embankment slope and stability (headwalls could retain fill slope)

3. Hydraulic efficiency

   Hydraulic capacity is affected considerably by inlet type. The head or backwater is determined in part by the entrance type and velocity of flow in the culvert. For example, consider a full flowing culvert with a velocity of 10 feet per second. The portion of total head caused by inlet type would be as follows:
### Inlet Type Entrance Loss Coefficient

<table>
<thead>
<tr>
<th>Inlet Type</th>
<th>Entrance Loss Coefficient</th>
<th>Increased Head (in feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projecting</td>
<td>0.9</td>
<td>1.4</td>
</tr>
<tr>
<td>Mitered</td>
<td>0.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Steel end section</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Square edge concrete headwall</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Rounded edge concrete headwall</td>
<td>0.2</td>
<td>0.3</td>
</tr>
</tbody>
</table>

E. **Pipe Shape:** Circular culverts and pipe arch culverts are commonly used for waterway crossings. Insofar as hydraulic performance is concerned, pipe arch shapes are superior to circular shapes of equal circumference during low flow conditions. The effective flow area of an arch pipe is approximately 45% greater than the effective flow area of an equivalent circular pipe at a depth of flow equal to one-half the diameter of the circular pipe. Greater effective flow area results in a lower outlet velocity and a reduced backwater effect. A lower outlet velocity means less erosion potential downstream. A reduced backwater effect means reduced flood damage potential upstream and less chance that a roadway will be overtopped. In addition, use of an equivalent pipe arch will mean less fill is required for the road embankment. Cost-wise, there is little difference in price between equivalent circular culverts and pipe arch culverts. To illustrate the advantage of pipe arch culverts, the following pipe comparison chart has been developed for hypothetical design parameters. Note that generally the calculated backwater and velocity is less for pipe arches.

### EQUIVALENT PIPES

<table>
<thead>
<tr>
<th>EQUIVALENT PIPES</th>
<th>NORMAL STREAM FLOW (cubic feet per second)</th>
<th>NATURAL STREAM DEPTH (feet)</th>
<th>UPSTREAM DEPTH WITH CULVERT (feet)</th>
<th>BACKWATER</th>
<th>CULVERT OUTLET VELOCITY (feet per second)</th>
</tr>
</thead>
<tbody>
<tr>
<td>36&quot; Diameter</td>
<td>50</td>
<td>2.19</td>
<td>5.12</td>
<td>2.93</td>
<td>8.37</td>
</tr>
<tr>
<td>43&quot;X27&quot; Arch</td>
<td>50</td>
<td>2.19</td>
<td>5.26</td>
<td>3.07</td>
<td>8.03</td>
</tr>
<tr>
<td>48&quot; Diameter</td>
<td>50</td>
<td>2.86</td>
<td>5.21</td>
<td>2.35</td>
<td>8.47</td>
</tr>
<tr>
<td>58&quot;X36&quot; Arch</td>
<td>80</td>
<td>2.86</td>
<td>4.94</td>
<td>2.08</td>
<td>7.21</td>
</tr>
<tr>
<td>60&quot; Diameter</td>
<td>120</td>
<td>3.48</td>
<td>5.76</td>
<td>2.28</td>
<td>8.48</td>
</tr>
<tr>
<td>72&quot;X44&quot; Arch</td>
<td>120</td>
<td>3.48</td>
<td>5.36</td>
<td>1.87</td>
<td>7.13</td>
</tr>
<tr>
<td>72&quot; Diameter</td>
<td>150</td>
<td>4.15</td>
<td>6.64</td>
<td>2.49</td>
<td>8.86</td>
</tr>
<tr>
<td>81&quot;X59&quot; Arch</td>
<td>180</td>
<td>4.15</td>
<td>6.37</td>
<td>2.21</td>
<td>7.46</td>
</tr>
</tbody>
</table>

It is quite apparent from review of the above-chart that pipe arch culverts hydraulically out perform equivalent circular culverts in most low flow situations. Whenever possible, therefore, field staff should recommend the use of pipe arch culverts in lieu of circular culverts. Although a single culvert was used for illustration, you will note that multiple culverts would be needed to reduce backwater.

F. **Culvert Outlet Problems:** When a given amount of water flowing in a stream is forced to go through a constriction such as a culvert the velocity continuity equation \( Q = VA \) generally applies to this situation. Since \( Q \) (amount of flow) remains the same and \( A \) (area of flow) is reduced, \( V \) (velocity of flow) must increase. The amount of velocity increase is proportional to the ratio of the unrestricted area of flow in the stream to the area of flow in the culvert. It is not unusual for velocity of a culvert to be 3 or 4 times higher than the natural stream channel. Such an increase in velocity could make it nearly impossible for fish to migrate. The effects of high velocity culvert...
outlet flow can also be very damaging, both to the stream and to the road embankment. The concentrated flow is highly erosive to the streambed. A scour hole may develop at the culvert outlet and any eroded bed material will be transported until it eventually settles out of the water. Downstream sedimentation can be environmentally damaging. The concentrated culvert outlet flow also tends to create eddy currents on either side of the culvert outlet. These eddy currents will cause erosion of stream channel banks and the toe of the road embankment. This additional erosive action may add to the downstream sedimentation problem and could result in road embankment failure.

A very significant factor in contributing to these problems is the use of culverts which are too short. Generally a culvert without headwalls or end sections should be long enough so that the inverts at each end extend at least to the toe of the road fill.

In order to prevent or minimize the highly erosive effect of culvert outlet velocity and accompanying eddy currents, some degree of protection should be provided to the road embankment and streambed. The following methods of protection are commonly used:

1. Riprap: The base of the road embankment and streamlined may be covered by an adequate layer of riprap. The size of riprap and extent of placement is dependent upon the type of material to be protected and the magnitude of the outlet velocity. Generally, riprap should be at least 6 inches thick but a thickness of up to 3 feet may be required when excessively high erosion potential exists. About 75% of the riprap material (by weight) should be larger than 3 inches in size and well graded. The maximum stone size required to resist erosion varies from about 6 inches for velocities of 5 feet per second to about 36 inches for velocities of 14 feet per second. Depending on the severity of the erosion potential, streambeds should be protected to about 2 feet above expected tailwater elevations. Prior to placement of streambed riprap, native material equal to the depth of the riprap layer should be removed so no additional restriction to stream flow results.

2. Prefabricated Steel End Section: End sections tend to spread the culvert outlet flow Laterally across the natural stream channel. This helps to break up concentrated outlet flow. The end section also tends to protect that portion of the embankment which would otherwise be subject to the highest degree of eddy currents. Some riprap may be required on the embankment slope for additional protection depending on the severity of the erosion potential. The end section also has an apron (bottom) which helps to prevent formation of a scour hole at the culvert outlet. Again, some riprap may be required downstream of the end section for additional protection.

3. End Walls: Steep embankment slopes may require an end wall to prevent embankment failure due to eddy currents. This treatment is generally expensive and the necessity for its use could be mitigated by altering embankment slopes and culvert length. Again, riprap or a concrete apron may be required to overcome erosion of the streamlined.

G. Embankment Material: The stability of a culvert waterway crossing requires not only adequate design of the culvert but the use of good road embankment material. The ability of the culvert to retain its shape and structural integrity is highly dependent on the selection, placement and compaction of the embankment material. A metal culvert is a flexible conduit which deflects under load. To prevent excessive deflection or failure the road embankment must provide lateral support to the culvert. Bank run gravel or similar granular material, properly compacted makes an ideal road embankment. Strength is developed by internal friction from the angular shapes interlocking. Granular material is drainable and not subject to undesirable performance when wet. On the other hand, silt and organic soils are totally unsuitable for good road embankments. When wet they tend to be highly compressible and lose structural capacity. They also tend to retain moisture and
therefore remain unstable for long periods of time. Most locally obtained soils are a mixture of coarse grained and fine grained material and with proper placement and compaction should make adequate road embankments.

Embankment fill should be placed in 6 to 8 inch layers and compacted within one pipe diameter on either side of the culvert. Often tire or track pressure from construction equipment together with hand or mechanical tamping within a foot or two of the pipe will provide adequate compaction. Compaction around the culvert pipe is required not only to develop pipe strength but to minimize settlement and potential piping (water seeping along the culvert-removing fine materials) which could lead to embankment failure when subjected to water pressure. Water pressure exists because of the head difference between the upstream and downstream water elevations. Piping or saturation of the road embankment can be minimized by placing a layer of impervious soil (such as clay) on the upstream slope.

H. Embankment Slope and Protection: Generally an embankment slope steeper than 1-1/2 horizontal to 1 vertical cannot be stabilized with vegetation and will require riprap protection. This is particularly true of the downstream slope of a road subject to overtopping. If this is the case, it may be necessary to riprap the downstream slope to prevent washout, although well vegetated flatter slopes (3:1 or flatter) can withstand some overflow. Whether or not stable vegetation can be established on a road embankment at all is dependent on soil type more than embankment slope. A sand and gravel road embankment with 3:1 slopes is unlikely to develop a good vegetative cover unless topsoil has been placed on the slopes. Soils with a good loam mixture should have slopes of 2:1 or flatter depending on the potential for overtopping. Every stream crossing should have riprap placed at areas subject to erosion such as around the inlet and outlet.

In order to minimize erosion the toe of all embankment slopes should not extend beyond the end of the culvert pipe unless a headwall or end section contains the fill.

FIELD INVESTIGATION

Field investigations are conducted primarily to determine the feasibility of the proposal. The investigation form (3500-23), if properly completed, should allow personnel unfamiliar with the project site to grasp the scope of the proposal fairly well. The investigators should address the following questions:

a. Do the plans appear to accurately represent the proposed culvert installation

b. Is there a better alternative site for the culvert installation in the immediate area?

c. Has the flood plain cross section been taken at a location representative of the area?

d. Are there natural or man-made constrictions in the vicinity of the proposed culvert which have not been shown or for which cross sections should be supplied?

e. Should less fill be used for the road embankment to minimize adverse effects on flood flows?

f. Does the culvert(s) appear to be large enough considering the need to conduct normal stream flow without restriction?

g. Will the culvert be an obstruction to navigation considering seasonal usage of the stream?

h. Could any damage occur upstream as a result of flooding caused by the culvert installation?
i. Will the culvert prevent or hamper fish migration and spawning activities?

**FINAL DISPOSITION**

The significance of technical review should be considered prior to issuance of a permit. The hydraulic analysis of a culvert crossing should not be regarded as a separate function solely to determine compliance with flood plain management standards. As mentioned previously, the results of hydraulic analysis must be considered in order to determine if a proposal meets statutory standards. Technical review determines natural flood stages at various flows, backwater effects at various flows, and culvert outlet velocities at various flows. This information can be used to determine:

a. If a culvert reduces the effect flood flow capacity of a stream.

b. If environmental damage may result from the culvert installation by:
   1. Scouring of streambed below culvert and subsequent downstream deposition.
   2. Deposition of material upstream of culvert due to reduction in stream velocity and/or impoundment.
   3. Erosion of road embankment due to unstable embankment slopes, overtopping or eddying of flow at culvert outlet.

Since the technical review could have a significant bearing on the results of the field investigation, every effort should be made to have it completed prior to the field check.

When the hydraulic review and field investigation have been completed we are in a position to determine if the permit application meets statutory standards. If it does meet standards the permit may be issued. If it does not meet standards, it will be necessary to request a hearing. A permit can only be denied by a decision of a hearing examiner.

Any person objecting to the decision issuing or denying a permit may seek judicial review by serving and filing a petition in accordance with the provisions of sections 227.15 and 227.16, Wis. Stats., within thirty (30) days of the decision date.

**MONITORING**

Permits should require the applicant to notify the Department five days before starting work and within five days of the completion of work. There should be a follow-up inspection to determine whether the work was done in accordance with the permit. Enforcement action should be considered if the work deviates significantly from the plans.

**EMERGENCY PROCEDURES**

On occasion existing culvert waterway crossings may sustain damage or fail due to flooding or accidents. If the culvert is authorized or "presumed in conformity with the law" we should allow repair or reconstruction without invoking permit requirements. Generally if a culvert needs to be replaced we should require the replacement to be of at least equal capacity.

**ENFORCEMENT**
Section 30.12(3), Wis. Stats., provides for a fine of not more than $1,000 or imprisonment for not more than 6 months or both for violation of s. 30.12 provisions OR for violating any term or condition of a permit issued under s. 30.12.

Section 30.15, Wis. Stats., provides for a forfeiture of up to $50 a day for any structure in violation of s. 30.12. It also declares an obstruction to be a public nuisance and provides for abatement at a suit of the state or any citizen.

EDUCATIONAL MATERIALS

Pamphlet, "Wisconsin's Water Regulation Programs Work for You"
Pamphlet, "Saving Your Shoreline"
The following procedure may be used by district and area staff in estimating the increase in flood stage which may be caused by a stream crossing for small streams. Its use is limited to streams which have no detailed study available.

1. Determine the total height of fill (y) associated with the stream crossing. (This is the elevation in feet from the bottom of the stream bed to the top of the fill over the culvert.)

2. Determine the slope(s) of the stream which will be crossed using USGS Quad sheets. Identify a contour line downstream from the project site and measure the distance along the stream to another contour which crosses the stream above the project site. Divide the difference in elevation represented by the contour lines by the distance between them along the stream-in feet to determine the slope in ft./ft.

3. Determine the upstream limit of potential increase in flood elevation by dividing the total fill elevation (y) by the stream slope (s) and measuring the resultant distance on the Quad map.

4. Legal Arrangements, Amendments and Notification
   a. Area Not Zoned

   The project may be approved for construction upon verification that all property owners within the upstream limit of potential increase have agreed to appropriate legal arrangements, either by flowage easements or by signing a waiver indicating they are not concerned with the increase in flood stages resulting from the proposed projects.

   The district office shall provide a copy of the data showing the calculated flood levels to the Bureau and the community.

   If the entire increase will be contained on the applicant's property, there is no need to obtain either
flowage easements or waivers.

b. Area Regulated by FP Zoning Ordinance

The community must amend its ordinance by adopting the profile generated by the approximation after appropriate legal arrangements are made with all affected property owners.

This procedure may be used for municipalities constructing culvert crossings under Trans. 207.

Reviewed by:

P. Scott Hausmann Date: 6-24-84
Larry A. Larson Date: 6-24-84
GUIDANCE PURPOSE AND DISCLAIMER

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance cannot be relied upon and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes, common law and administrative rules to the relevant facts.

This file is an electronic version of a chapter of the Waterway and Wetland Handbook. This document was scanned from the master handbook chapter kept at the Bureau of Fisheries and Habitat Protection central office in Madison. All effort was made to ensure this scanned electronic copy is an actual copy of the hardcopy document. Due to the electronic scanning process, there may be rare instances of typographical errors, omissions or improperly formatted pages. Please refer to the master handbook if accurate transcription is required.

A. PURPOSE

The diversion of flow from streams can have an adverse affect on aquatic communities and on downstream beneficial users. Section 30.18, Wis. Stats., was created to preserve the public interest in the waterways as well as the interest of any downstream users.

B. MECHANISM

Section 30.18 requires any riparian to apply for a permit to divert surface water from any navigable or nonnavigable stream for agricultural or irrigation purposes or to maintain the normal flow of any navigable stream, or to bring back or maintain the normal level of any navigable lake. It also requires most persons to obtain permits for diversions from any lake or stream if the diversion will result in a water loss averaging 2,000,000 gallons per day (3.09 cfs) in any 30-day period.

Section 31.02 allows the Department to establish a minimum level on any navigable body of water to protect public rights and interests.

Section 144.855 requires that diversion of surface water for mining purposes requires a permit under s. 30.18.

Section 144.026 requires any person withdrawing more than an average of 100,000 gallons per day (0.15 cfs) in any 30-day period, from any lake or stream, to register with the Department. If the withdrawal results in a water loss averaging more than 5,000,000 gallons per day (7.74 cfs) in any 30-day period from the Great Lakes Basin, the Department must consult with the Governor's Office and with each state and province in the Great Lakes Basin.
C. HISTORY

The legislature adopted the first surface water diversion statute after the state experienced a drought in the early 1930s. Chapter 287, Laws of 1935, created s. 31.14. The original intent of this section was to provide a permit system that would allow for the diversion of surplus water from streams in order to maintain levels and flows of navigable streams and lakes. However, the cranberry growers succeeded in having a provision added requiring authority for diversion of water for agriculture or irrigation purposes.

The first permit to divert surface water was issued in 1949, 14 years after the law was passed. From 1949 through 1959, the Public Service Commission (PSC) established a permit system for irrigation of riparian lands and issued 158 permits.

Chapter 436, Laws of 1957, allowed irrigators to use diverted water on lands contiguous to riparian land. It also included a provision that allowed the commission to reinvestigate irrigation permits and revoke them if it found that such diversions either damaged other riparians or the stream.

Chapter 441, Laws of 1957, contained several small changes but also included two significant alterations. First, s. 31.14 was renumbered to 30.18. Second, it provided for a $1,000 forfeiture for each violation.

In 1959, the court upset the commission's apple cart by ruling in Nekoosa Edwards Paper Co. v. Public Service Commission, 8 Wis. 2d 582 that two of the permits issued by the PSC were invalid. Prior to this case, the PSC assumed that consent of other beneficial users was only required when the PSC determined such users would be damaged by a diversion proposal. The court found that it was not within the jurisdiction of the commission to determine or adjust the rights of riparian owners injured by diversion of nonsurplus water. It further found that the commission's jurisdiction was limited to granting permits for surplus water when the permit was for maintenance of stream flows or lake levels. The commission could grant permits for agriculture and irrigation purposes to divert other than surplus water only with the consent of beneficial users.

Chapter 126, Laws of 1959, prohibited the diversion of water from any trout stream without prior written approval of the conservation commission. At that time the conservation commission and the permitting branch of the PSC were separate. This provision is probably not nearly as significant today as it was in 1959 since both functions are now within the Department. Nonetheless, this portion of the statute remains intact. Chapter 126 also required the commission to review all diversion permits issued since August 1, 1957, and revoke any it found to be detrimental to the stream or other riparians and required the PSC to revoke a permit for diversion from a trout stream if the conservation commission requested it for conservation purposes.

In 1961, Chapter 366 changed the penalty section from civil to criminal by adding a 6-month jail sentence and changing the forfeiture to a fine.

The Laws of 1963, 1965 and 1969 made minor editorial changes and shifted the administration from the Public Service Commission to the Department. Until 1963, the "contiguous land amendment" of 1957 was renewed biannually. The 1963 amendment made this provision permanent.

Chapter 200, Laws of 1965, authorized game wardens to enforce the penalties provided in s. 30.18. Prior to this time, program staff registered complaints.

Typically, most activity under this statute occurs during extended drought conditions. Such a period occurred in 1977, when the Department issued an emergency rule (NR 350) and the Governor's Office declared a temporary suspension of the notice requirements of s. 30.18 and allowed for applicants to go directly to hearings. In 1988, the Governor also temporarily suspended the notice requirements, and the legislature further extended the suspension. Future drought conditions will likely bring similar emergency
actions into play.

1985 Wisconsin Act 60 modified s.30.18 and s.144.026, as well as several other sections of the statutes. It required registration of withdrawals averaging more than 100,000 gallons per day (0.15 cfs) in any 30-day period, permits for losses averaging 2,000,000 gallons per day (3.09 cfs) in any 30-day period, and made several procedural changes in s.30.18.

1987 Wisconsin Act 374 (Ch. 30 rewrite bill) made some minor procedural changes to reflect current practice, but also decriminalized violation and required a review of permits at least every five years (formerly, an annual review was required).

In 1989, the legislature adopted Act 31 which included a definition of agriculture. This definition, presently in s.30.40(1), is our current definition of agriculture for chapter 30.

Several other acts over the years made minor changes to the statute.

D. STANDARDS

1. STATUTORY

a. Section 30.18 provides that:

1) Diversions permits can only be granted to owners of riparian land.

2) The diversion shall not injure public rights in the stream.

3) If other than surplus water is diverted, the diversion shall not injure any riparians without their consent.

4) Diversions for one of the following purposes require a permit:
   a) Maintaining the normal flow of any navigable stream.
   b) Bringing back or maintaining the normal level of any navigable lake.
   c) Agriculture or irrigation.

5) An application for a permit to divert water must contain the following:
   a) Name and address of the applicant.
   b) Name of the stream.
   c) The point on the stream from which the water will be taken.
   d) The name of the lake or stream, or description of lands to which the water is to be diverted.
   e) A description of the equipment involved.
   f) The amount and time periods of the diversion.
   g) Schedule for completion of necessary construction.
   h) Four sets of plans showing cross-sections and profiles of the diversion works and any dam or control works at the points of diversion and discharge.

6) Diversions applications for the purpose of maintaining normal levels of a navigable lake or normal flows of a navigable stream shall include a map on a scale of not less than 1 inch per 2,000 feet.

7) All diversion proposals shall be noticed pursuant to the procedures of s. 30.02.

8) The notice and hearing requirements of s. 30.18 supersede those of s. 144.836 when both apply.
9) Diversion from a designated trout stream in the Department's publication 6-3600 requires prior written approval from the Department.

10) The Department shall fix the amount of water to be diverted and when such water may be diverted.

11) Diverters may not withdraw more water than they did prior to 1957.

12) Diverted water may be used on contiguous land.

13) The Department may revoke a diversion permit on a trout stream if it finds the diversion is not in the interest of conservation.

14) The applicant may enter any land through which it is proposed to divert water, for purposes of preparing plans.

15) After the permit has been granted the permittee may construct diversion works on the lands of others, but only after damages have been paid to the owners and the plans have been approved by the Department.

16) If funds are available, the Department may, for conservation purposes, fix and raise the level of any navigable stream or lake. However, no lands may be flowed before the right to flow such lands has been secured.

17) The Department may not fix the level of any navigable stream or lake below the normal elevation.

b. Section 30.21 provides that any municipality or public utility situated on any waters of Lake Michigan or Lake Superior or in the Great Lakes Basin may, without a DNR permit, construct on the beds of such waters all cribs, intakes, basins, pipes and tunnels necessary or convenient for securing an adequate supply or water for the purposes of such utility provided adequate sewage treatment and disposal works for all the municipal sewage treatment needs are constructed. Public utilities also may improve the navigability and construct harbor facilities on such waters necessary for their operation.

c. Section 31.02 provides that the Department may, by order, fix a level for any navigable body of water below which it may not be lowered except as provided in Chapter 31. This statute allows the Department to restrict the diversion from lakes and ponds not normally covered under s. 30.18.

d. Section 86.17 provides that:

1) The general public has the right to use and take water from any spring, creek or running water that is running in or across the limits of any public highway.

2) The general public's use of such water may not interfere with the tunneling or piping of water for purposes of draining or improving adjacent land.

3) Any person interfering with the public's right to use such water is guilty of a misdemeanor.

e. Section 88.93 provides that:
1) An owner of land within a drainage district, whose land borders the drainage ditch, may take water from the ditch for purposes of flooding cranberry cultures or irrigation.

2) Diversions under this statute may not defeat the purposes of the drainage district.

3) Diversion under this statute for irrigation for other than cranberries also requires a permit under s. 30.18.

f. Section 94.26 provides that any cranberry grower may construct dams across any watercourse or ditch for the purposes of irrigating lands owned by the grower, provided the damming does not injure other lawfully constructed dams or ditches.

g. Section 144.026 requires:

1) Registration of diversions averaging greater than 100,000 gallons per day (0.15 cfs) in any 30 day period.

2) Permits for water losses averaging greater than 2,000,000 gallons per day (3.09 cfs) in any 30 day period.

3) Diversions from the Great Lakes Basin greater than 5,000,000 gallons per day (7.74 cfs) in any 30 day period require consultation with the other Great Lakes states and Canadian provinces.

h. Section 144.855 provides that diversion of surface water for mining purposes requires a permit from the Department under s. 30.18. Procedures under this statute shall be the same as those in s. 30.18 to the extent practicable. The standards involved in s. 144.855 are different from the standards of s. 30.18. The standards of this section should be reviewed in detail before a permit is issued.

2. ADMINISTRATIVE

a. NR 103 establishes water quality standards to be applied by the Department in decisions affecting wetlands. NR 103 further specifies the requirements to be used by the Department when determining the potential adverse effects of a project on a wetland versus the benefit to the applicant.

b. NR 104 establishes water quality standards that must be considered during Department permit procedures. Diversions must meet the minimum flow required for pollutant discharges specified in the Wisconsin Pollutant Discharge Elimination System (WPDES) permit.

c. NR 150 establishes procedures for determining whether a given project requires an Environmental Impact Statement (EIS). Diversion for maintenance of levels and flow are considered type II actions (requires an Environmental Analysis) while diversion for irrigation or agricultural purposes are considered type IV actions (do not normally require Environmental Analysis).

d. NR 210 establishes discharge limitations for discharges of pollutants into streams within the state. These limitations are predicted on maintaining minimum water quality standards and dilution at the 7-day, 10-year low flow discharge point.

3. ADMINISTRATIVE INTERPRETATIONS

a. Attorney General's Opinions:

A December 12, 1950, Attorney General's Opinion 39 OAG 564-568 clarified several matters. It
stated that:

1) A mere reduction in flow past any point in the stream did not necessarily injure the rights of the public or other riparians. Instead injury must be determined by the facts of the case.

2) Riparians whose water needs require consideration are those located along the stream below the proposed diversion to the point where it flows into a larger stream and loses its identity. This interpretation of affected riparians has been overruled. (See E.6.e.)

3) There is nothing in the statute that requires a reallocation of water after another permit is granted.

4) Water uses not covered by s. 30.18 are subject to the common law rule that each riparian owner has the right to make a reasonable beneficial use of the water coming to him or her.

5) Diverting water from a lake that reduces the flow of its outlet stream is a diversion from the outlet stream.

b. Declaratory Rulings

1) A December 31, 1975, order denied a request by Wisconsin Valley Improvement Company for a declaratory ruling to determine which riparians must give consent to use other than surplus water. This denial in effect continued the policy of requiring consent of riparians only to the confluence of the next stream. This policy has since been changed to require that we consider beneficial users to the point where the water leaves the state.

2) A May 12, 1976, declaratory ruling requested by the Plum Lake Golf Course stated that:
   a) The chain of title test is an appropriate method to determine riparian status and was recognized by the courts and the legislature.
   b) A riparian owner may separate the right to irrigate from the fee title of land. (Subsequent court cases have changed this decision—see Cassidy v. Dept. of Natural Resources, 132 Wis.2d 153 and de Nava v. DNR, 140 Wis.2d 213).

c. Bureau of Legal Services Opinions

A January 9, 1973, memo from Deputy Secretary Andrew C. Damon suggests that the present practice allowing transfer of irrigation permits is acceptable and only requires Department approval.

d. Administrative Policies

1) An internal memo dated January 26, 1973, addressed how the Department would administratively handle several aspects of s. 30.18. Several of the points made are as follows:
   a) No permit is required to divert water from a pond or lake that does not have an outlet. If the diversion averages greater than 100,000 gallons per day in any 30 day period, the registration, permit and consultation requirements of 144.026 may now apply.
   b) It is presumed that a riparian owner has a right to use water for domestic purposes (watering the lawn or noncommercial gardening) without obtaining a permit under s. 30.18. Such diversions must be of nominal amounts.
c) The amount of water that may be diverted is determined by the tillable acres from each riparian parcel.

2) Memos to the District Directors from Secretary Earl dated July 7, 1976 and Division Administrator George Meyer dated June 8, 1988 explained the emergency procedures to be used during the droughts of 1976 and 1988. (See E.15.)

3) A memo to the District Directors dated June 22, 1977, assigned the authority to approve diversions from trout streams to the District Fish Manager.

4) A memo to the District Directors from Bureau Director Robert Roden dated January 9, 1986, explained new procedures for registration, etc. under ss.30.18 and 144.026.

E. PROCESS

1. APPLICATION

The joint application form (3500-53) should be used with the s. 30.18 informational supplement (3500-60) for irrigation applications, which specifies additional informational requirements. The following information should be submitted before we consider an application complete:

a. The applicant must sign and date the application form. The applicant could be the riparian landowner or the landowner's agent. Under Common Law and the wording of s. 30.18(6), a nonriparian landowner cannot obtain a permit. If the applicant is purchasing the land under land contract, the seller also should sign the application, because the ownership is not transferred until the contract is completed.

b. Applicant's name, mailing address and other information required by the forms.

c. Name of the waterway and the precise location of the proposed diversion.

d. For applications to divert for agriculture or irrigation:

1) Maps showing which parcels of land are to be irrigated and the amount of tillable (arable) land included in each parcel.

2) The annual start-up and ending dates for diversion, the maximum number of acres to be irrigated, the type of crop(s) to be irrigated, the number of applications of water in a dry year, the number of inches of water per application, the maximum rate at which water is to be diverted, and information on the nature of the pumping/irrigating system.

3) An attorney's opinion that shows which portions of the land to be irrigated are riparian to the stream under the chain of title test. A permit can only be issued for the quantity of water needed to irrigate tillable, riparian land, although the water may be used on specified contiguous parcels of land.

e. For applications to divert for maintaining or restoring the level or flow of a lake or stream, a map at a scale of not less than one inch per 2,000 feet showing the topography and the location of the proposed diversion works, along with appropriate plans.

f. For registration to withdraw more than 100,000 gallons per day in any 30-day period:
1) The location of any discharge or return flow.

2) The location and nature of the water use.

3) The actual or estimated average annual and monthly volumes and rates of withdrawal and water loss from the withdrawal.

(See s. 144.026(3) for details on who must register.)

g. For applications to withdraw water that will result in a water loss averaging more than 2,000,000 gallons per day in any 30-day period, see the application requirements and other information in s.144.026(5).

After all the above information is received, a priority date should be assigned to each application. Applicants with an earlier priority date have superior rights over other applicants on the same stream.

2. RIPARIAN STATUS

Until 1957, s.30.18 did not specifically state that a permittee must hold riparian status. However, the 1950 Attorney General's opinion concluded that common law applies (reasonable use by riparians) and that nonriparian use of streams was restricted to navigation and its incidents. The Public Service Commission, therefore, administered the law by requiring riparian status in order to receive a permit.

The two common methods of determining riparian status were the "chain of title" (or "source of title") test and the "unity of title" test. The commission chose the more restrictive chain of title test.

The unity of title test states that all lots or tracts actually touching on a watercourse as well as those contiguous thereto and owned by the same owner are considered riparian.

Under the chain of title test each parcel of land must touch a stream or lake or must be part of a larger parcel, touching a stream or lake, and all of which has come down to the present owner as a unit in an uninterrupted chain of title from the original government patent. See further explanation on the back of the Irrigation Permit Supplement, Form 3550-60.

The Department requires an applicant to provide an attorney's opinion of the riparian status of the various parcels of land using the chain of title test. The field person reviewing the application should send the attorney's opinion to the Water Regulation Section for legal review.

Highways, railroads and other types of roadways may affect the riparian status of a parcel of land. If the right-of-way (ROW) is owned in fee, the portion of the parcel on the landward side of the ROW loses its riparian status unless a condition in the title specifically preserved riparian rights. On the other hand, if the right-of-way exists by way of an easement, the riparian status of the parcel remains intact.

3. CONTIGUOUS LAND

Contiguous lands may be separated from riparian or other contiguous parcels by ROWs owned in fee, without destroying the separated parcel status if the riparian holds an easement of ingress and egress connecting the two parcels.

Prior to 1957, agricultural diverters were not allowed to irrigate contiguous land. The contiguous land amendment of 1957 means that the volume of water withdrawn must be limited to that amount of water necessary to irrigate riparian tillable acreage.
4. **TILLABLE ACRES**

The amount of tillable riparian land should be calculated based upon existing conditions. The tillable land should be currently under cultivation, should have been used in the past for cultivation or should have the capability to grow crops without major alterations.

Appropriate means to demonstrate tillable acreage are wetland maps, a statement from the local Soil Conservation Service stating that the land is tillable, or aerial photographs showing the land under cultivation. See the back of Form 3500-60.

Once the tillable acres have been determined the annual allowable diversion of water can be established. The amount of water diverted should be no more than one inch per week of growing season unless justified by the soil type and the proposed crop.

5. **FIELD INVESTIGATION**

Upon receipt of a complete application, a field investigation must be made by Department staff. The investigation should determine whether the proposed diversion will adversely impact public rights in the stream. Establishing a "public rights stage" (minimum water level below which diversion is not allowed) is a major portion of the investigative effort. The public rights stage is the minimum stream stage that will meet the needs of navigation, fish and wildlife, water-based recreation, aesthetic enjoyment, and water quality preservation. The public rights stage is not intended to account for the water needs of downstream riparians.

Stage and flow are directly related. Generally, stage does not increase, in a natural setting without flow also increasing. Normally, an individual flow corresponds to a unique stage. For the remainder of the chapter, flow and stage are sometimes interchanged. For a more detailed explanation of the relationship between stage and flow see Attachment 1.

We determine the public rights stage by following the procedures in the fish management guidelines developed in March of 1977, included as Attachment 1.

Keep several factors in mind when using the guidelines. First, the guidelines state that the public rights stage should be set at the ordinary high-water mark on a stream with a normal summer flow of less than 10 cubic feet per second. This is acceptable only if the investigator can justify such a determination on a factual basis. The smaller the stream, the greater the effect of a particular diversion. A simple reduction in flow by itself may not injure public rights. View the 10 cubic feet per second threshold value specified in the guidelines as an indication of the size of the stream from which diversion may significantly injure public rights and not as a specific cutoff point. There are a number of warm water streams where such a diversion would not cause significant problems.

Second, the public rights stage should be realistic in terms of the normal range of flows experienced on the stream. As a general rule, the aquatic community will be limited by the average annual low flow occurring for a long enough period to produce some substantial effect on the stream ecosystem. The seven-day, two-year low flow (Q7,2) should be used to approximate the average annual low flow when gaging information is not available. It is strongly recommended that this low flow figure be considered when a public rights stage is established. Requiring considerably more water to be in the stream than would normally be there under natural late summer conditions may not be a realistic means of controlling a diversion.

In addition to establishing a public rights stage, the field investigation should include a measurement of
flow and stream gradient at the site and an evaluation of the biological communities present. Attach the flow and gradient measurement information to the field report for further processing.

In most cases where water quality is the only public right to be protected, the public rights stage should correspond with the seven-day, ten-year low flow ($Q_{7,10}$).

Specific documentation and rationale for the public rights stage should accompany the field investigation report.

6. **SURPLUS WATER DETERMINATION**

To determine surplus water, we must first inventory the downstream beneficial users. Under s. 30.18 surplus water is defined as that portion of the flow that is not being beneficially used downstream. The concept of surplus water should not be confused with the public rights stage. With the possible exception of WPDES permittees (waste dischargers), the flow required to protect public rights does not relate to the flow required by downstream beneficial users.

While the various users will all have different nonsurplus water requirements, the flow is not considered surplus until all downstream water needs have been satisfied.

In general, the water requirements of hydroelectric dams will exceed the public rights flow in the stream. The water requirements of downstream irrigators may or may not exceed the public rights flow requirements at the site. The water requirements of waste dischargers generally will be lower than the public rights flow requirements unless the public rights flow has been set at the seven-day, ten-year low flow.

The beneficial users and their water needs which the Department must specifically identify are:

a. Irrigators: The Water Regulation Section has developed and maintains a list of diverters. The list is broken down sequentially by permit number, and diversion sites are shown on county maps. Copies of permits issued in basins extending into more than one district should be sent to the “upstream” district(s) involved for their information and use between revision dates of the list.

b. Power Dams: A list has been developed by the Water Regulation Section and is updated as necessary.

c. Public Water Supplies: A list has been developed by the Public Water Supply Section of the Bureau of Water Supply.

d. WPDES Permittees: A basin/county printout of WPDES permits is provided by the Industrial Wastewater Section of the Bureau of Wastewater Management. Check for further permits since the last update.

e. Other users to be evaluated are:

1) Industrial diverters.

2) Commercial downstream recreational boating needs.

3) Private or commercial hatchery operations.

Because of the virtually unlimited possibilities for beneficial use, the Department should account for and
determine surplus water with respect to all known users downstream from the point of diversion.

Beneficial use by a private landowner generally implies some type of private or commercial use rather than common public use such as boating, swimming or fishing. The public uses should be acknowledged when setting the public rights stage rather than considering them nonsurplus water uses. (See Attachment 1)

The distance downstream to which we must identify beneficial users has not been specifically determined by the court. The Department in the past has used the end of the named streams as the "cut-off point" for recognition of beneficial users. Since the second Omernick v. Department Supreme Court case of 1975, the Department has construed the wording in the decision to mean that we can no longer arbitrarily limit the number of beneficial users. Therefore, all downstream beneficial users within the basin must be identified to the point where the water leaves the state or enters the Great Lakes. The point of use for various purposes is as follows:

- Hydroelectric dam: the location of the powerhouse.
- Diversion: the location of the intake pipe or structure.
- Waste discharge: the location(s) of the outfall(s).
- Public water supply: the location of the intake pipe or structure.
- Commercial downstream recreational use: the launching point plus those reaches of the stream frequently used by customers of the facility.
- Hatcheries: the point of diversion and of any discharge back to the stream.
- A property owner: that portion of the stream that touches the owner's property.

Once we have identified the beneficial users, we must determine their flow requirements. For a hydroelectric dam, the flow requirement at the dam is the maximum quantity of water that can be used by the facility to produce electrical energy. For irrigators, the flow required at the site of their diversion would be the public rights flow at that site plus the allowed diversion rate. For a public water supply, the flow required at the intake is the 7-day, 10-year low flow plus the maximum pump rate of the water utility. For a discharge permit holder, the flow required at the site of the discharge is the 7-day, 10-year low flow unless otherwise specified in their permit (in some cases such as wasteload allocation higher flows may be required).

When we know the flow requirements at the locations of the various users, we must relate these flows upstream to the site of the proposed diversion by some variation of the drainage area proportion method. The nonsurplus water requirements of a downstream user at a proposed upstream diversion site will equal some proportion of the amount required by the user plus a proportion of any consumptive withdrawals between the downstream user and the diversion site. The largest of these values computed from the various nonconsumptive use points will be the nonsurplus water at the diversion site. See Attachment #1 for more detailed discussion of this proportion method.

7. CONSENT TO DIVERT NONSURPLUS WATER

As specified in s.30.18(3)(a)3., diversion of nonsurplus water for irrigation or agriculture can be allowed only when all beneficial users consent to the diversion. Consent must be in writing, usually a letter sent from the user directly to the Department. We also have a sample letter that a user may use to grant consent. (see Chap. 200).

If all necessary consent has been obtained, the application may be processed further by issuing a public notice. If all necessary consent is not obtained, the applicant may request a hearing on the Department's determination of surplus water pursuant to Chapter 227. The only other alternative is for the Department to dismiss the application, unless the applicant agrees to divert only surplus water, with respect to any
beneficial user not consenting to the diversion.

8. **ALLOWABLE QUANTITY DETERMINATION**

Diversion permits should set limits on the volume of water diverted. Diverting more water than needed ("wasting") is considered an injury to public rights.

A rule of thumb for most crops is one inch of water per week. A greater volume may be justified by the applicant for certain purposes, e.g., golf courses.

The following formula will help:

a. Applicant's requested hours of pumping:

\[
\frac{(\text{Acres})(\text{inches of water per application})(\text{number of applications per year})}{\text{gallons per minute pumped/448.83}}
\]

b. Allowable hours:

\[
\frac{(1'')(\text{# of weeks per year})(\text{acres})}{\text{gpm/448.83}}
\]

If greater than 1" per week is justified by the applicant, use that figure.

c. To convert hours to gallons:

\[\text{gpm x 60 x hours}\]

9. **NOTICE REQUIREMENTS**

Beneficial users should receive a copy of the notice along with any individual who owns lands that will be used for the actual physical diversion. Notices must also be provided to the clerk of the town, village or city and county where the diversion takes place, the clerk of the next town downstream, and the clerk of any adjacent village or city through which the stream runs. Although not required by statutes, it is good practice to notify at least two downstream riparians in the vicinity of the proposal.

The notice should contain some general wording about surplus water. See a sample notice in Chap. 200.

10. **OTHER TYPES OF PERMITS**

a. Permits to Divert Water to Maintain Lake Levels or Stream Flow

This type of permit is relatively unusual (only about 15 have been granted since 1935). In many ways, processing such a permit is similar to that for the more common agricultural or irrigation diversion.

Major differences are:

1) The diversion may be to bring back or maintain the normal level of a navigable lake or the normal flow of a navigable stream. Higher than normal levels or flows cannot be authorized under this statute.

2) The water may be used in another watershed.
b. Registration to withdraw more than 100,000 gallons per day (0.15 cfs) from surface waters in any 30-day period.

1) Registration isn't required for a person holding a s.30.18 permit who reports the volume and rate of withdrawal (a standard permit requirement) and the volume and rate of water loss. Those reports are normally sent to the water management specialist, who forwards them to the Bureau of Water Regulation and Zoning, which provides them to the Bureau of Water Resources Management.

2) Registrations received by WZ personnel for withdrawals not requiring s.30.18 permits are forwarded directly to the Bureau of Water Resources Management.

3) Registration isn't required for a person holding a WPDES permit, for which the Department has established a water loss coefficient. Wastewater handles these permits.

c. Permits for withdrawals from surface waters resulting in a water loss greater than 2,000,000 gallons per day (3.09 cfs) in any 30-day period.

1) If the withdrawal is from a stream or a lake with an outlet stream, it must meet the standards of both ss.30.18 and 144.026.

2) If the withdrawal is from a lake without an outlet, it must only meet the standards in s.144.026(5). These standards, for application and approval, are considerably more comprehensive than s.30.18 standards. Since we expect to encounter these permits infrequently, the standards are not listed in this handbook.

Registration and permits are also required for appropriate withdrawals from groundwater. These are handled by the Water Supply program.

11. FINAL DISPOSITION

According to s.30.18(15) a permit cannot be issued for diversion of water from a trout stream without the prior written consent of the Department. "Prior written consent" must come from some unit within the Department with expertise in the area of fisheries management and not directly involved in the permit process. The district supervisor for fisheries management should be requested to determine whether or not consent should be given. When we grant a permit to divert water from a trout stream, the permit becomes the "prior written consent." Where consent is not granted, the district fisheries supervisor must send a letter refusing to grant consent, stating the reasons. The denial of consent should state that the applicant has a right to an appeal pursuant to Chapter 227, Wis. Stats.

A permit must contain the findings of fact regarding compliance with procedural requirements, the applicant's riparian status, the applicant's need for the water (a description of the proposed diversion), the establishment of the public rights stage, the Department's determination of surplus water and the required consent from downstream beneficial users, the effect of the proposed diversion on water quality and wetlands, and the completion of any required environmental analysis. A permit typically requires:

- that water only be used on riparian or contiguous land,
- that water only be diverted when the stage in the stream is above the nonsurplus stage,
- that flow metering equipment be installed to enable the Department to better monitor the diversion,
- that the permittee submit a record of water pumped,
that the permittee install a backflow control device if pesticides are injected into the system, and
that any activity affecting the quantity of riparian land owned or leased by the permittee be
reported to the Department.

A permit expiration date, usually required for a Ch. 30 permit, is not appropriate for a diversion permit
unless the diversion is short-term. See sample permit in Chap. 200.

Any person objecting to the decision issuing or denying a permit may seek judicial review by serving and
filing a petition in accordance with the provisions of ss. 227.42, 227.52 and 227.53 within thirty (30)
days of the decision date.

12. MONITORING OF PERMITS

a. Monitoring of the public rights stage: Most permits set a minimum water level below which
diversion may not occur. This water level should be related to a benchmark or gage at or near the
diversion site. In some cases, a flow at a USGS gaging station or a dam is specified rather than a
minimum water level.

The location where the minimum water level has been established should be reasonably accessible to
both the applicant and Department personnel. To detect a violation of the public rights stage, the
investigator must observe that the water level or flow is below the minimum while the pump is
running. In the case where a minimum flow has been specified at a USGS gaging station, the
permittee is responsible for determining when diversion is consistent with the permit. Specifying a
minimum flow instead of a minimum stage should be used sparingly, since it makes self-monitoring,
Department monitoring, and enforcement very difficult. Under this procedure, all parties involved
will have a difficult time determining whether or not the permit is being violated. An exception to
this case is when telemetering equipment has been installed at the gaging station. This remote
reading equipment should allow the irrigator to make routine checks of water levels to assure
compliance with the permit. Despite monitoring becoming very difficult, the size of the stream
involved may force staff to specify stream flows at gages rather than stages.

b. Reports by permittees: Permittees are required to report the dates on which they pumped and the
number of hours or gallons of pumping each day. This requirement should be supplemented by
readings from the flow meter of the total volume of water diverted before and after each period that
the pump has been running.

We must be cautious before using such reports by a permittee to establish a violation. Unless the
permittee has been advised of his right to remain silent before he has submitted the report, it would
appear that the evidence contained in those reports might not be usable against him. The reports may
be better used to form the basis for a revocation proceeding. "First offenders" should be sent a letter
advising them that the Department is aware that they are taking more water than their permit entitles
them to and that future violations may lead to revocation of the permit and possibly civil forfeitures.

c. Monitoring the quantity of water diverted: Where installation of flow metering equipment has
been required, monitoring both the diversion rate and the cumulative volume of water diverted only
requires direct reading from the flow meter.

At the end of the pumping season, the district person receiving the pumping reports should send an
annual summary of gallons pumped per permit per month to the Water Regulation Section.

13. REVIEW OF PERMITS
a. The Department may review any permit. In cases where public rights are not adequately protected from injury by existing permit provisions the permit may be revoked.

b. The 5-year Department review should not be used to adjust permits to the needs of existing beneficial users.

c. Review pursuant to a complaint may require that we revise the public rights stage or flow and may require adjusting the surplus water determination with respect to the complainant. We should hold a hearing to resolve the rights of the various parties.

14. AMENDMENTS, ETC.

Permits may be amended when property is sold, when the permittee requests modifications, when additional restrictions are warranted, or for other reasons. Here are some procedures for certain situations.

a. The permittee sells the property, and the new owner wants to continue the permit. The new owner should submit a written request, a description of the proposed operation (Form 3500-60 provides the needed information), and a copy of the deed. Check against the existing permit. If all is in order, issue a permit transfer.

b. The permittee requests diversion to additional riparian land. Permittee must own the land. A new attorney's opinion may be needed. The permittee may need new or revised consent from downstream beneficial users, depending upon the wording of their consent. If the new land is riparian, if the diversion rate will remain the same, and if the riparian status is verified, issue a permit amendment. If the lands are not riparian, treat as contiguous lands only (no additional water allowed).

c. The permittee requests diversion to additional contiguous land. Permittee may own or lease the land. Attorney's opinion and revised consent are not needed. The total amount of irrigated acres must not exceed the total riparian, tillable acres specified in the permit (or as amended in b. above).

d. The permittee requests an increased diversion rate. Check the status of any consent for diverting nonsurplus water. New consent(s) are required if a specified diversion rate will be exceeded by the new proposal. A substantial rate increase may warrant a new public notice. Check with the Water Regulation Section. If additional land is involved, also check riparian status.

e. The permittee no longer wants the permit. Issue an order rescinding the permit (see Ch. 200).

f. Over time, some permits have been amended many times, leaving a confusing paper trail. We should include all applicable conditions in their permit modifications, so the permittee has one document to follow.

15. ENFORCEMENT

The enforcement of s. 30.18 is very difficult. In addition, restoration obviously is not a viable alternative. This effectively limits formal enforcement to seeking a forfeiture or permit revocation. If an individual is found to repeatedly violate his or her permit provisions, we can presume that he or she would divert any time the water was needed. In such cases, we should consider revoking the permit. A local court would likely be more agreeable to obtaining a forfeiture from an individual diverting without a permit than from an individual who merely violates the terms of the permit.

Section 30.298 lists penalties for violations. Also note s. 30.292 (Parties to a Violation), which may be
helpful for citing the permittee if the violation is committed by an employee, lessee, or person buying the property under land contract.

16. EMERGENCY PROCEDURES

There are no on-going emergency procedures; however, during the 1977 and 1988 droughts, special administrative procedures were implemented to expedite the permit process. Under future drought emergencies we can probably expect similar emergency procedures.

Some examples of special procedures during the emergencies declared by the Governor and/or Legislature:

a. No public notice
b. No consent from downstream beneficial users.
c. No proof of riparian status (attorney's opinion).
d. Expanded definition of contiguous land.
e. Only for agricultural use.
f. Decision within 48 hours of inquiry.
A. TERMINOLOGY ASSOCIATED WITH MINIMUM FLOW CRITERIA

1. $Q_{7,10} =$ the consecutive 7-day low flow that occurs on the average of once in ten years.

This flow is statistically present or exceeded 97-99% of the time or flow may be at or below this discharge 1-3% of the time in any given year.

The $Q_{7,10}$ flow is used primarily for establishing water quality parameters for industrial and municipal wastewater dischargers. This flow is usually indicative of drought conditions. Generally, sustained instream flows at this discharge are devastating to instream aquatic habitat and biota.

2. $Q_{7,2} =$ the consecutive 7-day low flow that occurs on the average of once in two years.

This flow is statistically present or exceeded 90-93% of the time or flow may be at or below this discharge 7-10% of the time in any given year.

The $Q_{7,2}$ flow is used in conjunction with certain water quality criteria and was at one time used extensively in establishing minimum flows for irrigators or diversions in large riverine systems.

Similar to the $Q_{7,10}$ flow, the $Q_{7,2}$ flow has adverse impacts on instream habitat and aquatic biota to the extent of limiting biological diversity and density but usually not to the point of eliminating biological communities.

3. MINIMUM FLOW = a designated flow or flow requirement(s) imposed upon water users (i.e., dam owners) that must be released or present at all times to protect the public interest and rights in navigable waters.

Minimum flow criteria associated with biota usually varies on a seasonal basis depending on certain life stage requirements for aquatic flora and fauna. Habitat and wetted perimeter are key factors governing minimum flow requirements, e.g., spawning habitat for northern pike in a wetland contiguous to a stream or waterfowl habitat adjacent to the waterway.

Aesthetics and recreation are other parameters influencing minimum flow determinations. For example, the attractiveness of an area associated with the landscape, unique areas of historical or archeological interest or fishing, wading, canoeing, tubing, kayaking, water skiing are all examples of recreational considerations in determining a minimum flow regime.

4. PUBLIC RIGHTS STAGE = a designated water surface elevation (sometimes correlated to Q) that restricts any diversion of water from a waterway when the water level is at or below the public rights stage. The "public rights stage" is that water surface elevation that is necessary to protect public rights in a public waterway that could be altered by man-induced actions such as irrigation, etc. This public rights stage is the elevation equivalent to a designated minimum flow.

5. SURPLUS WATER = a determination of excess surface water not being beneficially used by downstream riparians or water users. This determination is made primarily for the purpose of protecting the water rights of existing beneficial water users. Beneficial use includes but is not limited to irrigation, hydropower generation, industrial diversion, domestic and municipal water supply and dilution or assimilation of municipal or industrial wastes. Surplus water is associated with the Doctrine of Prior Rights.
Appropriations (see Omernick v. DNR). The use of surplus water would not adversely affect an aquatic ecosystem and could therefore be consumed without the detriment to the resource or other existing beneficial water users.

B. PUBLIC RIGHTS STAGE DETERMINATION

We use this determination to find a minimum flow and/or stage to reasonably prevent injury to public rights. The procedure differs between small and large streams but the basic criteria are essentially the same.

1. NON-NAVIGABLE STREAMS

   a. The flow or stage selected should be at least that representing the 7-day, 10-year low flow ($Q_{7,10}$).

   b. If fishery values exist at the site or if there may be damage to or loss of downstream fish populations in navigable water, the stage or flow selected should preserve the existing aquatic habitat.

   c. If the stream contributes a major portion of the flow in downstream navigable waters (this would usually occur where two similar nonnavigable streams join to form navigable water or on a stream just before it becomes navigable), the stage or flow selected should preserve downstream navigability.

2. NAVIGABLE STREAMS

   a. The stage or flow selected should at least correspond to the 7-day, 10-year flow ($Q_{7,10}$) (water quality preservation is also a public right to be protected).

   b. The stage or flow selected should be adequate to protect fish and aquatic life and aquatic habitat. If stream margin terrestrial habitat depends on water levels, this also should be considered. A rough rule of thumb (the "Montana method") indicates that the minimum flow should be between 30 and 60 percent of the mean annual flow.

   c. The stage or flow selected should reasonably protect the stream's navigability.

   d. The stage or flow selected should reasonably preserve natural scenic beauty and environmental quality.

In addition to the above general procedure, the investigator should refer to the attached guidelines issued in 1977 by the Bureau of Fish Management. Use the 10 cfs criteria with caution. All public rights stages selected by staff must be rooted in fact and not generalities.

C. RELATION OF PUBLIC RIGHTS FLOW TO DIVERSION

If the public rights flow/stage has been established downstream from the diversion point, that flow or stage must be present in the stream at the designated location while the pump is running. This is the preferred relationship since this directly accounts for the diversion's effect.

If the public rights stage or flow has been established at a point upstream from the diversion site, add the maximum diversion rate to the actual public rights flow and use this larger figure to prevent injury to public rights. Because of the approximations that must be made, this approach is less desirable than having the control point downstream.

The stream flow at the site is important because it allows us to relate the frequency of a particular flow,
which we know or can speculate about, to the frequency of a particular stage, which we know very little about.

If the stream is gaged nearby, it may be possible to use the data at the gage to regulate the diversion.

On large streams where a flow measurement at or near the site is not practicable, a stage of flow will be used to determine the public rights stage. The flow should also be estimated and compared to USGS projected $Q_{7.10}$ and $Q_{7.2}$ values as a check on the stage selected.

A simple method to estimate flow is the floating chip method. Estimate or, if possible, measure the width of the stream. Measure the depth of water above (or below) the stage selected. Estimate the average velocity by floating chip method. The volume of flow above or below the public rights stage is then:

$$Q = AV = (dw)V$$

Where d is average depth, w is width, A is cross-sectional area, and V is the estimated velocity.

D. FISH MANAGEMENT GUIDELINES FOR DETERMINING STREAM "PUBLIC RIGHTS" STAGE

1. INTRODUCTION

The "public rights" stage is the highest minimum stream stage (elevation of the water surface at a point along the stream) resulting from an analysis of the components of the public rights in streams. These components include navigation, fish and wildlife, water-based recreation, aesthetic enjoyment, and preservation of water quality. Various "private" rights exercised by riparian owners (domestic use, industrial use, irrigation or agricultural use and power generation) are accounted for separately in determining the quantity of surplus water available. Municipal and industrial waste dischargers have a dual status because they constitute both a public and a private interest.

These guidelines will be applied by fish managers to intermediate-size streams as a part of the investigation resulting from an application under Section 30.18, Wisconsin Statutes, for authority to divert water for irrigation. The guidelines include a stream classification system, a listing of stream characteristics important to the "fishery management stage" and other "public rights" stages and a procedure for evaluating stream characteristics leading to establishment of a "public rights" stage. Comments about establishment of a navigation and aesthetics "public rights" stage are also included. The objective is to establish the minimum stage necessary to provide food and cover for fish and other aquatic organisms.

2. STREAM CLASSIFICATION

For the purpose of establishing a fishery "public rights" stage, three classes of streams will be used (continuous flow streams only):

a. Streams with 10 cfs or less av. summer flow

   (June 1 - September 30). The minimum stage for fishery interests is the ordinary high water mark.

b. Intermediate streams from 10 cfs to 25 cfs av. summer flow

   The fishery interest stage is below the ordinary high-water level and must be established by the fish manager.
c. For large streams, over 25 cfs av. summer flow, navigation and water quality public rights factors generally govern.

3. **STREAM CRITERIA**

The criteria to establish this stage must take into consideration the following items:

a. Wetted perimeter - the stream bottom, including the banks that are flowed.

b. Water depth - necessary to provide cover in the pools and maintain food production on the riffles.

c. Stream cover - material or conditions that provide protection, concealment and resting areas in undercut banks; overhanging grasses; shrubs or down trees, instream cover; rocks, boulders or logs; aquatic vegetation; pool depth, and currents that provide concealment by turbulence.

d. Bank stability - water pressure provides stability to prevent slumping in stream banks composed of heavy soils or soils with high water holding capacity. Sudden drawdowns or fluctuations in water level can cause these banks to break down destroying cover.

e. Gradient - the pool riffle ratio.

f. Velocity - provides cover, reaeration and contributes to the variety and abundance of food organisms.

g. Cross sectional area - the living space for aquatic organisms, a function of width and depth at any station.

h. Ordinary high-water mark - the point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation, or other easily recognized characteristics.

All of these items should be considered when establishing the fish management stage. The object is to maintain sufficient water to provide both cover and food, not only at the site but in downstream reaches as well.

E. **PROCEDURE**

1. A general reconnaissance of the stream above and below the site for at least 100 meters or to the controlling riffles if they are present.

2. Establish the ordinary high-water mark on both banks using natural indicators along the bank or thread of the stream, i.e. undercut banks, exposed roots of trees or shrubs, staining of rocks or structures, changes of vegetation types, algae or aquatic organisms.

3. Establish the fish management interest stage - the highest minimum stage that will assure adequate water to provide fish and other aquatic organisms, food and cover.

   **Adequate bank cover** shall be maintained, where it presently exists. In the absence of existing bank cover adequate depth, velocity and instream cover shall be maintained.

   **Food production areas** shall be maintained with adequate depth to provide living conditions for the species represented in the study area.
4. Identify the fish management interest stage by tying it in with the ordinary high-water mark and a temporary benchmark.

5. Establish minimum stage for:
   a. Navigational requirement
   b. Aesthetic requirement

6. Document (highest minimum stage) - public rights stage resulting from above evaluation of fish management, navigation and aesthetics by establishing benchmark reference at appropriate adjacent upland site and reference point (stake in bed or bank, mark on bridge abutment or piling, etc.). Document with photos and survey notes.

F. STREAM GAGING

On streams small enough to gage, a minimum stage can be established and related to flow by Manning's equation. Conversely, if no stage is established, an appropriate minimum flow can be selected and related to the corresponding stage by Manning's equation.

Stream flow may be measured with reasonable accuracy in most cases. Exceptions are areas with highly turbulent flow (rapids, rocky shallows, riffles), areas where the velocity is so low that the inertia of the current meter becomes significant (deep pools, especially sluggish reaches), or at locations with a marked nonuniform flow distribution (bends). Avoid these areas. Also, make sure that the stream bed is firm enough to hold the meter without any significant settlement and that major shifts in the stream bottom will not occur.

The stream is divided into a series of "slices" or sections. These should be of uniform width (generally 1-3 feet, depending on the stream's total width and the uniformity of the channel geometry and velocities), although the last section may be an odd size. Simply stretch a tape across the stream and measure velocities at even increments on the tape. The velocity distribution in a vertical cross-section is such that the maximum usually occurs at about 0.2 of the total depth down form the surface (the surface velocity is reduced to about 95% of the maximum by air resistance). The velocity at 0.6 of the total depth down form the surface is the average velocity in the vertical section (generally 85-90% of the surface velocity).

1. END SECTION METHOD

   Measure the velocity across the stream at 0.6 of the measured depth down from the surface (0.4 of the depth up from the bottom) at each incremental point. (The velocity and depth at each bank are usually zero.) Compute the discharge as the sum of the products of the average velocities and the cross-sectional areas of each incremental "slice." For example, the average velocity in the cross-hatched section is

   \[ V_{AVE} = \frac{V_1 + V_2}{2} \]

   The area of the section is approximately

   \[ A = \frac{W(d_1 + d_2)}{2} \]

   The discharge is

   \[ Q = AV = \frac{W(d_1 + d_2)(V_1 + V_2)}{4} \]
Discharge is computed on Form 3500-2, Stream Discharge Data.

As a general rule, no one section should contain over 10% of the total discharge (this is hard to avoid on small streams). Flows should not be computed to more than one place to the right of the decimal point (the measurements are not accurate enough to warrant any more). Velocities should be recorded to hundredths of a foot per second. The observer should note if the flow is at, above, or below normal, and whether any obstructions are present to influence measurements.

2. **MID-SECTION METHOD**

With the mid-section method, also divide the stream into "slices" or sections of uniform width. Measure velocities at the middle of each section instead of at both ends. Results are similar to those obtained by the end-section method. Compute the discharge as \( Q = V \times W \times d \).

Situations will arise where one method will provide a more "correct" answer than the other, especially in sections adjacent to the bank. A zero velocity at the bank will favor the end-section method while a bank velocity roughly equal to that at one-half section width from the bank will favor the mid-section method. As long as a reasonable number of velocity measurements are made, computed flows should be comparable.

If site conditions are unusual enough that normal flow measurements are questionable (highly turbulent flow, substantial obstructions or aquatic vegetation, etc.) make independent estimates of flow at nearby culverts or weirs.

The end-section method is recommended for the following reasons:

On small streams where the bank sections carry a higher percentage of the total flow, the end-section method will normally provide better results.

Uniformity within the water management program is highly desirable to increase the interchangeability of data and eliminate potential confusion.

Form 3500-2 is based on the end-section method and is most easily used with it. With the mid-section method, measured depths become mean depths and "mean in vertical" measured velocities must be recorded as "mean in section" velocities. Care must be taken to record the stream width as it does not automatically show up in the last velocity measurement.

Measure velocity at enough points to define the flow distribution. Ten measurements are a bare minimum except in unusually narrow streams. On streams more than ten feet wide, always take more than ten measurements. The following can be used a guide:

<table>
<thead>
<tr>
<th>Width</th>
<th>No. of Velocity Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 10 ft.</td>
<td>10 if possible</td>
</tr>
<tr>
<td>10-20 ft.</td>
<td>Minimum of 10</td>
</tr>
<tr>
<td>20-60 ft.</td>
<td>Minimum of 20</td>
</tr>
<tr>
<td>60-90 ft.</td>
<td>Minimum of 30</td>
</tr>
<tr>
<td>Over 90 ft.</td>
<td>One every 3 feet; maximum of 40</td>
</tr>
</tbody>
</table>

To simplify computations, keep the section widths as integral multiples of 0.5 foot. The last section will contain whatever is left below a full increment.
Consider channel geometry and flow distribution when locating measurement points. If the flow is markedly nonuniform, use more sections (smaller intervals) in the high flow portion of the channel. Likewise fewer measurements are needed in low-discharge areas.

The reliability of the measurement is more important than maintaining a uniform interval that is only for convenience of computing flows. Avoid point restrictions such as rocks, clumps of vegetation, small logs, and small scour holes. Adjust the distance between measuring points to bracket such nonrepresentative areas.

It is a good idea to compute stream flow by hand shortly after finishing measurements. This is especially helpful when the public rights stage is being set at the same time. You can compare the measured flow, estimated flow at public rights stage, and known low flow values (Q_{7.2}, Q_{7.10}) to check the reasonableness of the public rights flow while still in the field.

Once a particular stage and discharge are known a relationship can be developed that defines flows over a variety of stages. This relationship is known as a stage/discharge curve or a rating curve. Standard hydraulic techniques should be used to develop this relationship.

G. BASIN APPROACH AND WATERSHED HYDROLOGY

The basin approach provides an approximate means by which flows at one point in a drainage system can be translated to their equivalent at another location. The need for such a procedure is the relative lack of flow data in Wisconsin, particularly low flows at diversion sites.

Wherever possible, consider using correlation techniques and other data (such as seepage runs along a stream) because the results will be more accurate. If time does not permit, however, we must use more approximate methods.

The basin approach estimates the amount of flow, on a proportional basis, that should pass a given point in the basin to maintain a particular flow at some downstream point on the same tributary or on a main stream (the method does not apply to points on downstream tributaries--it only applies to locations through which the same water will pass). The procedure allows us to estimate corresponding flows between different locations in the basin for different parts of the flow-duration curve. It will be most accurate for nearby points in similar geologic settings and for flows in the middle of the range; the technique becomes less accurate as we include extreme flows and geographical variations in the determination. It is also more approximate as the distance between points increases due to the greater likelihood of differences in precipitation.

1. DETAILED PROCEDURE

The procedure is based on a variation of proportioning flow by drainage area (refer to Figure C-1). Within the gaged subbasins, flows will be based on a proportion from the gaging station in that basin. In other words, at a point P1 in subbasin 1, the flow is

\[ Q_{P1} = \frac{Q_{G1} A_{P1}}{A_{G1}} \]

Where \( Q_{G1} \) = flow at gaging station G1, \( A_{P1} \) = drainage area at point P1, and \( A_{G1} \) = drainage area at gaging station G1. For an ungaged stream, the preferred approach is to use a similar gaged stream nearby. For example, at a point P4 in an ungaged basin, the flow could be expressed as

\[ Q_{P4} = \frac{Q_{G1} A_{P4}}{A_{G1}} \]
These expressions can be simplified by using the term

\[
\text{cfsm}_l = \frac{Q_{G1}}{A_{G1}}
\]

where \text{cfsm} is cubic feet per second per square mile of drainage area. For areas where nearby gaged tributaries are not likely to be representative, a more complex technique is called for.

We may represent the flow at the basin outlet or exit point as

\[
Q_{Gt} = Q_1 + Q_2 + Q_3 + Q_{\text{ungaged area}} = A_{Gt} \left( \text{cfsm}_{Gt} \right)
\]

where \(Q_1 = A_1(\text{cfsm}_{G1}) = \) flow at outlet of basin B1

\(Q_2 = A_2(\text{cfsm}_{G2}) = \) flow at outlet of basin B2

\(Q_3 = A_3(\text{cfsm}_{G3}) = \) flow at outlet of basin B3

\(Q_{\text{ungaged}} = A_{\text{ungaged}} \left( \text{cfsm}_{\text{ungaged}} \right)\)

In the expression for \(Q_{Gt}\), everything is known except \(\text{cfsm}_{\text{ungaged}}\) because

\[
A_{Gt} = A_1 + A_2 + A_3 + A_{\text{ungaged}}
\]

and \(A_{\text{ungaged}}\) can thus be computed. Therefore, \(\text{cfsm}_{\text{ungaged}}\) can be computed. We can then compute for other points in the system in the following manner:

\[
Q_{P2} = A_1(\text{cfsm}_{G1}) + A_2(\text{cfsm}_{G2}) + (A_{P2} - A_1 - A_2)(\text{cfsm}_{\text{ungaged}})
\]

\[
Q_{P3} = A_1(\text{cfsm}_{G1}) + A_2(\text{cfsm}_{G2}) + (A_{P3} - A_1 - A_2 - A_3)(\text{cfsm}_{\text{ungaged}})
\]

As a variation, if we consider the subbasin where point P4 is located to be similar to the subbasin where gaging station G1 is located, the flow at point P2 can be calculated as

\[
Q_{P2} = (A_1 + A_4)(\text{cfsm}_{G1}) + A_2(\text{cfsm}_{G2}) + (A_{P2} - A_1 - A_2 - A_4)(\text{cfsm}_{\text{ungaged}})
\]

This approach takes into account the variability of individual subbasins to the extent possible while still using a basic drainage area proportion technique. A more accurate approach would be to develop a basin hydrologic model using correlation and flow routing techniques. Such a model may be available in limited instances, but is generally too time consuming and costly.

The basin approach can be used to transfer mean annual flows, mean annual low flows, or 7-day, 10-year low flows from one point to another. It must be recognized that while a transfer of mean annual flows may be relatively accurate, transfer of low flows is more approximate because of the greater potential for variation in the factors that control low flows.

Another example of using this technique is in proportioning downstream user requirements to an
upstream site. If P2 is a proposed diversion site and the downstream user is a hydrodam located at P3, the following steps will approximately proportion the flow:

a. Estimate stream flow at point P2 based on downstream gage, Gt

\[ Q_{P2} = A_1 (\text{cfsm}_{G1}) + A_2 (\text{cfsm}_{G2}) + (A_{P2} - A_1 - A_2)(\text{cfsm}_{\text{ungaged}}) \]

b. Similarly estimate flow at point P3

\[ Q_{P3} = A_1 (\text{cfsm}_{G1}) + A_2 (\text{cfsm}_{G2}) + A_3 (\text{cfsm}_{G3}) + (A_{P3} - A_1 - A_2 - A_3)(\text{cfsm}_{\text{ungaged}}) \]

We can relate the downstream user flow at point P3, \( Q_{UP3} \) to the estimated natural flow \( Q_{P3} \) by a ratio and the flow at point P2, \( Q_{UP2} \) needed to sustain the downstream user is then

\[ Q_{UP2} = Q_{P2} \left( \frac{Q_{UP3}}{Q_{P3}} \right) \]

It should be recognized that this is not a straight drainage area proportion because we have accounted for the variability of subbasins. We can use the same technique to estimate upstream flow requirements for any downstream beneficial user whose flow requirement is known. Perhaps the most laborious part of this computation is to determine drainage areas at a specific site. Sometimes these can be found in or closely approximated from the U.S. Geological Survey (USGS) publication, "Drainage-Area Data for Wisconsin Streams." In other cases, it may be necessary to planimeter areas from topographic maps upon which the watershed boundaries have been determined and outlined.

If the point in question is on the main stream below the most downstream gage (e.g. the Chippewa River below Durand, the Wisconsin River below Muscoda, the Fox River below Rapids Croche Dam), we can estimate the flow as

\[ Q_{POINT} = A_{POINT}(\text{cfsm}_{Gt}) \]

2. APPROXIMATE PROCEDURE

In many cases, we cannot use the detailed procedure due to time constraints or general lack of data. We then use a more approximate technique to transfer flows within a drainage basin.

The technique is most appropriate on streams where USGS gaging stations are located. The basis for the technique is the variation of average flows between different gaging stations. The indicator used is the "cfsm" for each respective station (the average flow for the period of record divided by the drainage area at the station). This indicator typically will change from station to station within a drainage basin and reflects the variation in flow contributions between tributaries and points on the main stem on an average basis. In unusual circumstances, we can use a flow other than the average to develop the cfsm ratio (\( Q_{7,2} \) could be used, as an example), but extreme high or low flows should be avoided. Whatever flow type is selected, the same must be used for all other stations in the analysis. As an example, cfsm ratios are calculated for various stations within the Chippewa River basin using USGS flow data for 1976.

<table>
<thead>
<tr>
<th>Station</th>
<th>Period of Record</th>
<th>Drainage Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average Flow (cfs)</td>
<td>(sq. mi.)</td>
</tr>
<tr>
<td>Chippewa River near Winter</td>
<td>716</td>
<td>787</td>
</tr>
<tr>
<td>Chippewa River near Bruce</td>
<td>1460</td>
<td>1630</td>
</tr>
<tr>
<td>Chippewa River at Chippewa Falls</td>
<td>5110</td>
<td>5600</td>
</tr>
<tr>
<td>Location</td>
<td>Q ungaged</td>
<td>A ungaged</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Chippewa River at Durand</td>
<td>7524</td>
<td>9010</td>
</tr>
<tr>
<td>Red Cedar R. near Cameron</td>
<td>399</td>
<td>453</td>
</tr>
<tr>
<td>Red Cedar R. near Colfax</td>
<td>754</td>
<td>1100</td>
</tr>
<tr>
<td>Red Cedar R. at Menomonie</td>
<td>1243</td>
<td>1760</td>
</tr>
<tr>
<td>Flambeau River near Bruce</td>
<td>1839</td>
<td>1900</td>
</tr>
<tr>
<td>Jump River at Sheldon</td>
<td>514</td>
<td>574</td>
</tr>
<tr>
<td>Hay River at Wheeler</td>
<td>294</td>
<td>426</td>
</tr>
</tbody>
</table>

To use this method, there must be a cfsm figure that applies to the proposed diversion site (if there is none, either the detailed procedure or the unweighted drainage area ratio method must be used). For any downstream user lacking a cfsm figure (this is very unlikely to occur where there is a cfsm at the proposed diversion site), an unweighted drainage area ratio must be used.

3. **UNWEIGHTED DRAINAGE AREA RATIO**

In cases where data is very sparse or greater accuracy is not needed, assume the flow to be directly proportional to drainage area at any particular site. This assumption is rather crude since it does not account for the various factors other than drainage area (such as geology, soils, vegetative cover, topography, precipitation, etc.) that affect stream flow. In those cases where approximations are acceptable, this method provides a "ball park" answer with a minimum of effort.

4. **EXAMPLES**

A series of examples will be used to show how to transfer the requirements of a downstream user to an upstream diversion site using the various methods. The applicant is a hypothetical irrigator on the Chippewa River in Rusk County. The user is the Holcombe Dam on the Chippewa River, owned by Northern States Power Company. The basic data is shown on Figure C-2.

a. **Detailed Procedure**

\[ Q_d = Q_1 + Q_2 + Q_3 + Q_{ungaged} \]

\[ Q_{ungaged} = A_{ungaged}(cfsm_{ungaged}) \]

\[ 5110 = 1460 + 1839 + 514 + A_{ungaged}(cfsm_{ungaged}) \]

\[ A_{ungaged} = 5600 - (1630 + 1900 + 574) = 1496 \text{ sq. mi.} \]
1297 = 1496 (cfsm_{ungaged})

cfsm_{ungaged} = 0.867

Average flow @ Holcombe

\[ Q_{ave} = 1460 + 1839 + 514 + 4700 - (1630 + 1900 + 574) \times (0.867) \]

\[ Q_{ave} = 3813 + (596) \times (0.867) = 4330 \text{ cfs} \]

Average flow @ diversion site

\[ Q_{ave} = 1460 + 1839 + 3800 - (1630 + 1900) \times (0.867) \]

\[ Q_{ave} = 3299 + 270 \times (0.867) \]

\[ Q_{ave} = 3533 \text{ cfs} \]

User requirement for Holcombe Dam transferred to the diversion site then is

\[ Q_{req'd \text{ @ site}} = (3533) \times (12,300) = 10,036 \text{ cfs} \]

\[ 4330 \]

b. CFSM Procedure

Once a cfsm figure has been determined for each site, we apply the ratio of these to the user flow requirement.

The cfsm figures are only applied to the same named stream as the respective gaging stations. In other words, a cfsm figure from a main stream gaging station would not be applied to an ungaged tributary. Also, when more than one gaging station is located on the same stream, the cfsm figure is assumed to vary linearly with drainage area between the stations.

Since both the applicant and the user are located on the Chippewa River, we use the closest gaging stations on that stream.

For the Holcombe Dam:

\[ \text{cfsm near Bruce} = 0.896 \text{ (D.A. = 1630 sq. mi.)} \]
\[ \text{cfsm @ Holcombe} = ? \text{ (D.A. = 4700 sq. mi.)} \]
\[ \text{cfsm @ Chippewa Falls} = 0.912 \text{ (D.A. = 5600 sq. mi.)} \]

Thus, cfsm @ Holcombe = 0.896 + (4700 - 1630) \times (0.912 - 0.896) \times \frac{(5600 - 1630)}{1630} \]

\[ = 0.908 \]

For the applicant:

\[ \text{cfsm near Bruce} = 0.896 \text{ (D.A. = 1630 sq. mi.)} \]
\[ \text{cfsm @ applicant} = ? \text{ (D.A. = 3800 sq. mi.)} \]
\[ \text{cfsm @ Chippewa Falls} = 0.912 \text{ (D.A. = 5600 sq. mi.)} \]
Thus, \( cfsm @ \) applicant = \( 0.896 + \frac{(3800 - 1630)(0.912 - 0.896)}{(5600 - 1630)} \)

\[ = 0.905 \]

Average flow @ Holcombe = \( \frac{(0.908)(4700)}{(0.896)(1630)(5110)} \)

\[ = 4266 \text{ cfs} \]

or

Average flow @ Holcombe = \( \frac{(0.908)(4700)(5110)}{(0.912)(5600)} \)

\[ = 4270 \text{ cfs} \]

and

Average flow @ applicant = \( \frac{(0.905)(3800)(1460)}{(0.896)(1630)} \)

\[ = 3438 \text{ cfs} \]

or

Average flow @ applicant = \( \frac{(0.905)(3800)(5110)}{(0.912)(5600)} \)

\[ = 3441 \text{ cfs} \]

User requirement for Holcombe Dam @ proposed diversion site then is

\( Q_{reqd} @ \) site = \( \frac{(0.905)(3800)(12300)}{(0.908)(4700)} \) = 9912 cfs

Note that we may compute the average flow by using either the upstream or the downstream gage (the figures are essentially the same).
c. Unweighted Drainage Area Ratio

Average flow @ Holcombe = \( \frac{(4700) (1460)}{(1630)} \)

= 4210 cfs

or

Average flow @ Holcombe = \( \frac{(4700) (5110)}{(5600)} \)

= 4289 cfs

Average flow @ applicant = \( \frac{(3800) (1460)}{(1630)} \)

= 3404 cfs

or

Average flow @ applicant = \( \frac{(3800) (5110)}{(5600)} \)

= 3468 cfs

Flow requirement for Holcombe Dam @ diversion site

= \( \frac{(3800) (12,300)}{(4700)} \)

= 9945 cfs

d. Comparison of Results

<table>
<thead>
<tr>
<th></th>
<th>Ave. Flow @ Holcombe</th>
<th>Ave. Flow @ Diversion</th>
<th>User Flow @ Diversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detailed Method</td>
<td>4330</td>
<td>3533</td>
<td>10,036</td>
</tr>
<tr>
<td>CFM Method</td>
<td>4270</td>
<td>3440</td>
<td>9,912</td>
</tr>
<tr>
<td>Unweighted Method</td>
<td>4250</td>
<td>3435</td>
<td>9,945</td>
</tr>
</tbody>
</table>

In this case, little difference is noted between methods. There are several reasons for this:

1) There is little variation in cfsm figures between gaging stations.

2) All cfsm values are close to 1.0

3) The evaluated sites chosen are near each other and are on the same stream with only one intervening tributary (the Jump River).

These conditions will not exist in most cases, so we must be careful in choosing the method. In
general, we should use the cfsm method when there is a cfsm value for the proposed
diversion site.

5. **LOW FLOW HYDROLOGY**

We frequently need to estimate the $Q_{7,2}$ and $Q_{7,10}$ flows at a diversion site. Several USGS publications
are available to provide estimates for a variety of locations in Wisconsin. When using these publications,
take care to use the most up-to-date figures. It may be a good idea to contact USGS directly to obtain this
data.

a. Available Data

The following publications contain low flow information:

1) "Low-Flow Frequency of Wisconsin Streams" by Warren A. Gebert, U.S. Geological Survey
   Hydrologic Investigations Atlas HA-390; 1971. This publication consists of a map of Wisconsin
   showing low flow figures at various gaging stations. Many of the estimates on the map are
   outdated.

2) "Low-Flow Characteristics of Wisconsin Stream at Sewage-Treatment Plants" by W. A. Gebert
   This publication contains a number of low flow figures at various sites in Wisconsin and is
   organized by drainage basin. Most figures in this publication are still reliable.

3) "Preliminary Estimates of Low-Flow Characteristics of Wisconsin Streams at Sewage Treatment
   Plants and Industrial Plants" by B. K. Holmstrom, U.S. Geological Survey Administrative
   Report; 1977. This report contains up-to-date low flow information at a variety of sites and is
   organized by drainage basin.

4) U.S. Geological Survey Hydrologic Investigations Atlases for various river basins in the state.

5) U.S. Geological Survey Open-File Reports

   In some cases, the hydrology of a particular stream is covered in a U.S.G.S. report. An example
   of such a report is "Low-Flow Characteristics of Eau Claire River Basin Near Antigo,
   Wisconsin," that contains low-flow estimates at and near several existing and proposed diversion
   sites.

6) U.S.G.S. Low-Flow Basin Studies

   The U.S.G.S. developed a series of reports on low flows in most basins around the state. The
   reports contain equations that can be used to estimate both $Q_{7,2}$ and $Q_{7,10}$ at any site in the basin.
   Better results are obtained at sites where at least one base flow measurement has been made.

7) USGS may be able to provide low flow estimates over the phone for basins without published
data.

b. Examples of Low-Flow Estimation

Three common situations are found in low flow estimation. Each is discussed in turn and an example
of estimating flow is provided.
1) More than one low flow estimate on the stream: This is typical for larger streams. First, plot the $Q_{7.2}$ and $Q_{7.10}$ values against drainage area on log-log paper. We can use the best straight line through the $Q_{7.2}$ points to estimate $Q_{7.2}$ at any other location with a known drainage area. Where there is any significant scatter so that one straight line does not come close to all of the points, it is better to simply connect successive points by straight lines. The broken line, consisting of the various segments, is than used to estimate low flows. The same procedure applies for $Q_{7.10}$. Plotted points may be from stations on the main stream only or may include stations on major tributaries. For example, a curve can be developed for the Embarrass River and its major tributaries. The data is as follows:

<table>
<thead>
<tr>
<th>Stream</th>
<th>Drainage Area (Sq. Mi.)</th>
<th>$Q_{7.2}(cfs)$</th>
<th>$Q_{7.10}(cfs)$</th>
<th>Source*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Embarrass River, South Branch</td>
<td>27</td>
<td>5.6</td>
<td>3.4</td>
<td>1</td>
</tr>
<tr>
<td>Embarrass River, South Branch</td>
<td>94.8</td>
<td>23</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>Embarrass River, North Branch</td>
<td>39.5</td>
<td>9.8</td>
<td>6.0</td>
<td>2</td>
</tr>
<tr>
<td>Embarrass River</td>
<td>265</td>
<td>54</td>
<td>33</td>
<td>2</td>
</tr>
<tr>
<td>Embarrass River</td>
<td>395</td>
<td>75</td>
<td>45</td>
<td>1</td>
</tr>
</tbody>
</table>

* Sources
(1) H.A. - 390
(2) WRI 45-74

The lines on this graph would essentially pass through all of the points. This is not always true. Care should also be taken in extrapolating the curves (estimating flows for drainage area less than or larger than those for all of the data points).

2) One flow estimate on a stream: In this situation, use a drainage area proportion from the known site, weighted, if necessary, by the generalized low-flow runoff values from the basin hydrologic atlases (references 4a-l).

For example, estimate the low flow on Duncan Creek (Chippewa County) at a location near New Auburn (D.A. = 15 sq. mi.). From WRI 45-74, $Q_{7.2} = 10.5$ cfs and $Q_{7.10} = 6.7$ cfs for D.A. = 49.2 sq. mi. From H.A. 386, low flow runoff = 0.51 cfs/sq. mi. at the low flow station and = 0.41 cfs/sq. mi. at the proposed diversion site. Soil permeabilities are roughly similar. Thus the low flows at the site are:
\[ Q_{7.2} = \frac{10.5 \times (15) \times (0.41)}{49.2 \times (0.51)} = 2.6 \text{ cfs} \]
\[ Q_{7.10} = \frac{6.7 \times (15) \times (0.41)}{49.2 \times (0.51)} = 1.6 \text{ cfs} \]

3) No low flow measurements on the stream. Two procedures are available here:

a) Use of basin low flow curve.

One method for tributary streams is to assume that the low flow curve for the main stream applies to the tributary. For example, determine the low flow on Moose Ear Creek in Barron County (tributary to Chetek and Red Cedar Rivers).

D.A. @ site = 39 sq. mi.; from Red Cedar River low flow curve.
\[ Q_{7.2} = 3.1 \text{ cfs} \]
\[ Q_{7.10} = 1.9 \text{ cfs} \]

b) Use of basin transfer methods.

A second method is to find a similar nearby stream and relate its low flows to the stream in question with appropriate weighting from the generalized low flow runoff shown on the basin hydrological atlas. Again, the example will be Moose Ear Creek, Barron County. A nearby stream is Rock Creek, where, according to HA 390, \( Q_{7.2} = 7.3 \text{ cfs} \) and \( Q_{7.10} = 3.1 \text{ cfs} \) for a drainage area of 41 square miles. According to the "Surface Water Resources of Barron County," both streams begin as trout streams in the Blue Hills area, both have relatively steep gradients (15 ft/mile for Moose Ear Creek and 21 ft/mile for Rock Creek), and both are 11-12 miles long. The Chetek topographic map shows similar forest cover in both watersheds. HA 386 shows similar soil permeabilities and low flow runoff characteristics. The low flows on Rock Creek can thus be used to estimate those on Moose Ear Creek. At the site,
\[ Q_{7.2} = \frac{7.3 \times (39) \times (0.3)}{41 \times (0.33)} = 6.3 \text{ cfs} \]
\[ Q_{7.10} = \frac{3.1 \times (39) \times (0.3)}{41 \times (0.33)} = 2.7 \text{ cfs} \]

c) Comparison

The two estimates do not agree very well in this case. The suggested procedure is to average the two estimates. In this case, the USGS has estimated the low flows at:
\[ Q_{7.2} = 4.1 \text{ cfs}; \quad Q_{7.10} = 2.1 \text{ cfs} \]

The average of our two estimates is:
\[ Q_{7.2} = 4.7 \text{ cfs}; \quad Q_{7.10} = 2.3 \text{ cfs} \]
c. Additional Comments

It should be recognized that low flows cannot be as readily transferred from site to site, particularly between drainage basins, as can average flows. This is true because the factors affecting low flow (bedrock geology, soil permeability, forest cover, etc.) often vary more between adjacent watersheds than those affecting average flows (precipitation, general topography, general soil condition, etc.).

Separate low flow estimates are not required for various downstream user locations (WPDES permittees, public water supplies) as well as for the diversion site. Instead, the low flow values at the diversion site are presumed to satisfy low flow needs downstream.
TO: Regional Directors  
FROM: Mary Ellen Vollbrecht  
Rivers and Regulations Section, FH/3  
SUBJECT: Program Guidance on s. 30.18 Permits  

This guidance provides specific instructions to carry out the 1995 Water Regulation and Zoning Program Management Team decision to stop requiring monthly pumping reports from surface water diverters (mainly agricultural irrigators). Pumping reports measure the amount of water taken from surface waters. The data is important to analyzing the resource impacts of diversion and other activities, but is not analyzed on an ongoing basis.

1. If you haven't already done so, notify diverters in writing that they no longer need to report, but that they are responsible for keeping their own records and providing them to us on request. That way, we can get the information when we need it. Failure to keep the records is a violation of the permits. If we amend the permits in the future, we can modify the record keeping requirement.

Staff may still ask for the monthly reports if staff decides it wants them, but notify the applicant of how we intend to use the data.

We should also remind the diverters to advise us of address changes and that a new owner must obtain a permit transfer if the property is sold.

Dale Lang prepared a sample notification letter which your staff can use or modify. A copy is attached. It's also on the WZDATA file service as PUMP.LET.

2. For diverters who have an agreement with Wisconsin Valley Improvement Company, letters should include a statement that they must report annually to WVIC, and give them a couple of our annual pumping record sheets with which to do it. If they fail to report, WVIC can rescind the agreement and take whatever action it desires to recover damages.

3. New permittees should still install flow meters so they have some way to keep records and we can verify the amount pumped. New permits should change the record reporting condition to state "submit the record to the DNR upon requester"

4. In following years, the Rivers and Regulations Section will send an annual letter to all permittees reminding them of the requirements. Therefore, field staff should send the section a list of the current names and addresses along with the permit numbers, after sending out this year's letter. The list needs to identify WVIC diverters and diverters from whom monthly reports are required. Staff should then send copies of future name and address changes to the section (FH/4).
This annual letter to surface water irrigation permittees announces some significant changes to our procedures. Please read this carefully so you understand what is required in the future.

1. The Department no longer requires you to submit pumping reports to us. However, it is still necessary for you to keep your own records. From time to time we may ask you for the records when we are doing water use planning in your area, responding to complaints, or monitoring water consumption. Your permit requires you to maintain the records. If you don't have the records, you will violate your permit.

   If your permit requires you to have a flow meter, you must maintain it so you can keep records and we can verify the amount pumped.

2. You must notify us of any address changes. Please send them to my office.

3. If you sell the property to another party who wants to continue irrigating from the waterway, the new owner must apply for a permit transfer. Please have the new owner contact me. If the new owner does not plan to irrigate, we will cancel the permit.

4. (OPTIONAL) If you are in the Wisconsin River basin and have an agreement with Wisconsin Valley Improvement Company, you must send an annual pumping report to WVIC. The address is:

   2301 North Third St, Wausau WI 54403-3299

   This is required so WVIC will know how much you pump and can bill you for the water you use. If you don't send WVIC your report, the company could revoke your agreement and possibly take legal action to recover the water use cost or even prevent you from using your permit. Be sure to keep a copy of the record you send to WVIC so you can show it to us when needed.

5. The Rivers and Regulations Section at our central office in Madison will periodically send you a letter to remind you of the requirements.

I'm enclosing several of our annual pumping report forms for you to use. Feel free to make copies of them in the future, or contact me if you need more. Remember -- don't mail them to us unless we ask you to send them.

Please contact me if you have any questions.
Sincerely,
lang\pump.l
GuSELF

GUIDANCE PURPOSE AND DISCLAIMER

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance cannot be relied upon and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes, common law and administrative rules to the relevant facts.

This file is an electronic version of a chapter of the Waterway and Wetland Handbook. This document was scanned from the master handbook chapter kept at the Bureau of Fisheries and Habitat Protection central office in Madison. All effort was made to ensure this scanned electronic copy is an actual copy of the hardcopy document. Due to the electronic scanning process, there may be rare instances of typographical errors, omissions or improperly formatted pages. Please refer to the master handbook if accurate transcription is required.

Purpose

The state has recognized that lands near or adjacent to navigable waters hold a special relationship with respect to water quality and other public rights. The main purpose of this statute is to protect navigable water from adverse effects caused by connected enlargements, grading, and ponds.

Mechanism

Section 30.19, Wis. Stats., requires a person to obtain a permit prior to enlarging any navigable waterway, creating any artificial waterway within 500 feet of a navigable waterway, creating a water course with intent to ultimately connect to a navigable waterway, or grading in excess of 10,000 square feet on the bank of any navigable waterway.

History

Section 30.19, Wis. Stats., was created by Chapter 284, Laws of 1961. At that time, Section 30.19 only applied to enlargements connected to navigable water. In 1963, Chapter 313 added permit requirements for projects within 500 feet of a navigable watercourse, grading in excess of 10,000 square feet on the bank, and ultimately connecting an artificially created waterway to an existing navigable watercourse. Chapter 313, Laws of 1963, also provided permit exemptions for the repair of public highways, agriculture use of land, and constructing projects in counties with more than 500,000 people. A penalty section was also added to the statute.

Chapter 148, Laws of 1965, added notice requirements to include the property owner's association or five persons living along the affected body of water. Provision was also made for the granting of a permit without a hearing, when no objections were received.
Chapter 273, Laws of 1971, added the requirement that a project must not cause environmental pollution as defined in section 144.01(3), Wis. Stats. No changes have been made to this statute since 1971.

The overall effect of these changes has been to substantially broaden the regulatory control of the Department under section 30.19, Wis. Stats. The original intent of the statute was to control only directly connected enlargements of navigable water sources. Prior to 1961, a connected enlargement could be constructed with no state authority, but the created watercourse became public provided the connection was navigable and legal public access was available. Unconnected ponds built prior to 1961 needed no state approval and are considered private waterways. The major effect of the current language in S. 30.19 is to require permits for many previously exempt projects, and to explicitly provide that permitted projects become public waterways.

Statutory Standards

Section 30.19, Wis. Stats., provides that the Department must make the following findings prior to issuing a permit:

a. The project will not injure public rights or interest.

b. The project will not cause environmental pollution as defined by section 144.01(3), Wis. Stats.

c. The project conforms to platting and sanitation laws.

d. No material injury will result to the rights of any riparian owner on any affected waterway.

Section 144.01(3), Wis. Stats., defines environmental pollution very broadly, and includes any act resulting in adverse impacts to the interests mentioned in s. 144.01(3). These interests specifically include the preservation of water quality.

Administrative Code Standards

Administrative rules directly applicable are NR 340, which governs the permitting of lowland sand and gravel operations, and NR 130, which governs mining. NR 340 provides definitions of terms commonly used in connection with Section 30.19, Wis. Stats., detailed guidance on the data requirements for any sand, gravel, or quarrying operation requiring a Chapter 30 permit; and bonding, requirements for those operations.

Local flood plain ordinances and NR 116 provide guidelines on allowable floodway and flood fringe uses and define the allowable backwater from a project. NR 116 will usually be applied to determine the backwater effect caused by spoil disposal in the floodway and the adverse impact on adjacent property owners.

County shoreland ordinances and NR 115 closely relate to erosion control by regulating the amount of clear cutting permitted along the shoreline. They state that no more than 30 feet per 100 feet of shore frontage shall be clear cut for a depth of 35 feet inland from the OHWM. Many counties require special exception permits for certain filling, grading and enlarging actions in or near navigable waters.

NR 1.95 establishes general standards to be applied by the Department in decisions affecting wetlands. The Department shall consider proposals which require its approval with the presumption that wetlands are not to be adversely impacted or destroyed and that the least overall adverse environmental impact shall result.
NR 150, Wis. Adm. Code, establishes procedures for determining whether a given project requires an Environmental Impact Statement (EIS). Connected enlargements are Type II actions, while unconnected ponds and grading in excess of 10,000 square feet are Type III actions.

Legal and Administrative Opinions

1. The definition of agricultural exemption includes the raising and harvesting of food and fiber crops, livestock and dairy farming. Agriculture does not include aquaculture, silviculture, pisciculture, or processing of raw agricultural products (BLS opinion 12/21/76).

2. The applicability of Section 30.19, Wis. Stats., with respect to municipal or industrial wastewater treatment facilities is restricted to cooling water ponds. Section 30.19 does not apply to sewage lagoons, clarifiers, digesters, activated sludge tanks, grit chambers, trickling filters and chlorine contact tanks because they are not artificial waterways within the meaning of Section 30.19, Statutes (BLS Opinion 7/16/76).

3. After a Section 30.19, Statute, permit has been issued the enlargement (connected or unconnected) becomes public water. Any access by the public must be legally obtained. In other words, the dedication of an enlargement to public waters does not authorize trespassing over private lands to reach those public waters. (Some sand and gravel projects authorized under Section 30.19 and NR 340 have included public access requirements.)

The applicant should also be aware than since the enlargement is now public water, any further enlargement, dredging or new construction that changes the authorized dimensions of the enlargement will need a Chapter 30 permit. (BLS Opinion 11/9/76).

4. An unconnected pond built before 1961 is a private waterway. Connected enlargements built before 1961 did not require permits, but are considered public waterways if the connection is navigable in fact. (BLS Opinion 3/24/76).

5. Ponds constructed for agricultural purposes are exempt from 30.19, Wis. Stats., regulation. These ponds are private waterways unless directly connected to a navigable waterway. Even if an agriculturally exempt pond is later converted to a nonexempt use, it remains private, provided no additional work is done on the pond. However, the pond loses its 30.19 exemption if it is converted to nonagricultural use and additional work is done on the pond. (BLS Opinion 12/21/76).

6. NR 340.02(2) defines bank as "the land surface abutting the bed of any navigable water body which, either prior to any project or alteration of land contours or as a result of the proposed project or alteration, slopes or drains without complete interruption into the water body." This definition has never been interpreted in a legal opinion, administrative opinion, or court decision above the county court level.

7. NR 340.02(13) defines ultimate connection as "the joining of a waterway to an existing body of navigable water below the elevation of the latter's ordinary high water mark where the joining is by means of an open channel having a bed and banks." This definition has been further interpreted in the 4/29/82 Roden to District Directors memorandums).

8. An artificial lake created by enlarging or damming a navigable stream is automatically a public lake, even though the flowed lands remain privately owned. A lake or pond created by enlarging a nonnavigable stream is private, unless the enlargement required a 30.19, Wis. Stats., permit, or the enlargement became public through prescriptive use by the public. (64 OAG 146, 1975). (OAG 52-75.)
Section 30.19 applies to all artificially created watercourses within 500 feet of the OHWM of any navigable body of water. The fact that the artificially created water body is perched or diked is irrelevant. (BLS Opinion 7/11/72.)

Plans for dams on nonnavigable streams may be approved as part of the 30.19 approval process (if applicable). (BLS Opinion 9/28/72.)

Unconnected ponds built prior to 1963 did not require any state permit authority. However, if the pond is within 500 feet of a navigable body of water, the dredging of such a pond after 1963 would require a 30.19 permit, unless the pond is agriculturally exempt. In addition, construction of a dam on the outlet of such a pond would also require a 30.19 permit. In either of these cases, the originally private pond would become public water upon issuance of the 30.19 permit. (BLS Opinion 1/9/73.)

**Process**

**Notice Requirements:** Any project requiring a Section 30.19 Wis. Stats., permit must be noticed according to s. 30.19(3). The Department must mail copies of the notice to the clerks of the municipality and county where the project is located, and at least five persons living along the affected waterway or the Secretary of a property owner's association (30.19(2)(c)). Although the statute requires the Department to notify the Department of Health and Social Services, they no longer regulate the platting laws, so this requirement is moot. If no objection to the application is received, we may grant the permit without a hearing. If an objection is received, the application must be set for hearing in accordance with s. 31.06, Wis. Stats.

**Field Investigation**

The scope of the required field investigation depends upon the complexity of the project. If the project involves commercial extraction of sand, gravel or rock, the requirements set forth in NR 340 apply. This requires the applicant to supply more information than for an ordinary project.

I. Unconnected Ponds

Unconnected ponds should be analyzed to determine if they are in the floodway or flood fringe of a stream. If the pond is in the flood fringe or out of the flood plain entirely, and the spoils will not be deposited in the floodway, the requirements of NR 116 will be met, although a local zoning permit may be required. If the spoils will be placed or dikes constructed in the floodway, a determination of backwater must be made. This determination will require that the applicant submit an accurate scale drawing of the spoil disposal site. A cross section through the pond extending across the entire width of the flood plain must also be included. The location and elevation of the spoil disposal area must be shown on this cross section.

Sometimes a field investigation will be sufficient to determine if a project will be outside of the floodway. Bridges or known constrictions in the floodplain are often useful aids when determining floodways. Horizontally, the floodway will contract at approximately a 45 degree angle to get through the constriction and will expand at about a 14 degree angle after the constriction. In other words, after the constriction the floodway will expand one foot for every four feet of stream. If the spoil deposits or berms will be outside the expansion or contraction, NR 116 will be satisfied. If a field investigation is insufficient, the applicant should submit a full valley cross section, and an engineering determination of the backwater effects must be made.

See the training material on Bridges, Chapter 80, Design Considerations Section 2, Hydraulic Review for a description of necessary data to complete a hydraulic review.
If the project's impact on flood elevations exceeds 0.1 foot, the local ordinance (if there is one) must be amended and agreement reach with all affected landowners. Note that some ordinances require amendments for any increase. (See attached Roden memo of 2/1/82 for details on permissible legal arrangements)

Points of concern which should be addressed in the permit review process include:

a. Fish and wildlife impacts of the project.

b. Pollution impacts of enlargement (See Section 144.01(3), Wis. Stats., NR 104 and NR 102).

c. Hydraulic impacts of spoil disposal.

d. Conformance of the project with sanitation and land platting requirements in Chapter 236, Wis. Stats.

e. Aesthetic impacts of the project (no standards currently exist; value judgment involved).

f. Wetland location and project consistency with NR 1.95.

g. County zoning requirements.

h. Potential for connection of the pond due to bank washout.

i. Adjacent land use and riparian property owner concern.

2. Connected Waterways

Connected waterways have the potential for serious detrimental effects. Because of the connection, pollution in an enlargement may move directly into the main body of water. Points of concern which should be addressed in the permit review process include:

a. Fish and wildlife impacts of the project.

b. Pollution impacts of the enlargement (See Section 144.01(3), Wis. Stats., NR 104 and NR 102).

c. Hydraulic impacts of spoil disposal or dike construction.

d. Other possible hydraulic effect of the enlargement including the potential for stream realignment because of the project.

e. Conformance of the project with sanitation and land platting requirements.

f. Aesthetic impacts of the project.

g. Impacts of constructing the enlargement;
   1. Maintenance of the junction between the natural water body and the enlargement.
   2. Debris buildup potential in the enlargement.

h. Aquatic nuisance problems.

i. Expansion of riparian rights to previously nonriparian landowners.

j. Wetland impact and project consistency with NR 1.95.

k. Possible breach of lake bed seal, leading to water level reductions.

l. County zoning requirements.

m. Stability of project; will it last with reasonable maintenance?

n. Impact on the use of the main waterway.

o. Adjacent land use and riparian property owner concern.

Some of the above items may have application to unconnected ponds and should be applied accordingly.

3. Grading

a. Slope Angle
Selecting a stable slope angle for the proposed new bank is very important and will vary depending upon the soils at the site and the intended use of the area. A good indicator of the suitability of the proposal is the surrounding slopes of the stable and unstable areas.

The less cohesive the materials, the flatter the required slope. The stability of a cohesionless sand is dependent only on slope, while the stability of a cohesive material depends upon slope and the vertical height. Generally the maximum slope which would be allowable is 2:1. Further information is available in the Department handout on shore protection.

b. Erosion control

The amount of erosion which can be expected is dependent upon the contributing drainage area, the slope of the embankment, particle size and the amount of rainfall. One or a combination of the above may dictate the need for some of these erosion control methods:

1. Straw bales used as check dams
2. Seeding & mulching
3. Earthen dikes
4. Excelsior matting (artificial woven erosion control mats)
5. Gobi mats (perforated concrete mats through which vegetation can grow)
6. Gabions (rock-filled wire baskets)
7. Sodding
8. Diversion ditching or sedimentation ponds
9. Leaving a buffer strip of vegetation

Erosion control is most important during spawning and egg incubation seasons; if possible, work should be scheduled for less sensitive times. The best time for grading from an erosion control standpoint is when the surrounding vegetation is most lush (RJK). Further information may be found in “Environmental Do's and Don'ts on Construction Sites” published by the U.S. Soil Conservation Service.

4. Fishery

If the applicant is planning to develop a fishery in the enlargement through stocking, consideration should be given to the potential for intermingling of the stocked fish with any existing native fish populations during periods of high water or through escape. Such stocking would require permits pursuant to Sections 29.52 or 29.535, Statutes, and NR 19.05, as applicable.

In connected enlargements, losses of fish can occur due to low oxygen periods. Even in cases where movement of fish is not physically blocked, connected enlargements lacking circulation, such as long lagoons, can suffer oxygen depletion and winter kill. Summer algae die-offs in connected lagoons in fertile lakes have also been documented to cause oxygen depletion and summer kill conditions.

In connected enlargements where the water level in the main water body fluctuates significantly, the enlargement should be constructed so that its bottom slopes toward the connection (preferable) or is level, thus reducing potential for entrapment during low water.

In unconnected enlargements, the potential for fish entrapment must be considered. If it appears probable that fish will be washed into the impoundment, consideration should be given to requiring an easement for public access to fish the impoundment. This situation is specifically addressed in NR 340.05(d).
Final Disposition

The permit should specify exactly what is being authorized. The allowable time frame for the project must be included in the permit. All erosion and pollution control measures the applicant is expected to employ should be listed. If the project is authorized under NR 340, bonding requirements, progressive reclamation plans and final reclamation plans must be referred to in the permit. In all cases, reference should be made to the final application to indicate exactly what plan the Department has approved. Any plan for maintenance dredging should be included in the permit, or further proceedings under 30.20 will be required.

Any person objecting to the decision issuing or denying a permit may seek judicial review by serving and filing a petition in accordance with the provisions of sections 227.15 and 227.16, Stats., within thirty (30) days of the decision date.

Monitoring and Enforcement

For gravel pits, see NR 340. All permitted projects should be examined at least upon completion to determine compliance with the permit. Projects permitted under NR 340 should be checked by the water manager according to the schedule outlined in that code.

Violations of s. 30.19, Wis. Stats., are punishable by a fine not to exceed $1,000, as provided by s. 30.19(b). This fine may be imposed by action of a local court. In addition, the Department may ask for restoration of the site under s. 23.79(3), Wis. Stats., which allows a judge to require restoration as part of a civil action brought by the Department. The Department also has the option to proceed under s. 30.03, in which case a hearing examiner may order restoration, but not monetary damages.

Education

There are four pamphlets produced by the Department which should be useful in educating the public on s. 30.19, Wis. Stats., related matters:

- Saving Your Shoreline discusses proper design of riprap. This may be necessary as part of shore stabilization in an enlargement project.
- Wisconsin's Water Regulation Programs Work For You provides a general outline of the water regulation permit program.
- Public or Private I - Navigability discusses the concept of navigability and how it affects private rights.
- Public or Private II - The Ordinary High Water Mark discusses the relationship of the OHWM to private property rights.

There are two sample drawings available for 30.19 projects, "Pond Application Information Requirements" and "Connected Enlargement Information Requirements". Both of these drawings contain sample drawings and information requirements for ponds and connected enlargements respectively.

Sources and Products for Coastal Engineering and Erosion Control (DNR) provides a convenient list of supplies of geotextiles, sheet piling and other products for shore protection and erosion control.
DATE: April 29, 1982

TO: District Directors

FROM: Robert W. Roden - WRZ/5

SUBJECT: Program Guidance on Fish Hatchery Construction #30.19 Permit Requirements

The subject of permit requirements for the construction of fish hatchery ponds has arisen in several Districts recently. Most of the problem is centered around the definition of "pond" and "ultimate connection". This memo is an interpretation of previous legal opinions for the purpose of determining jurisdiction over hatchery operations.

If the project is not within 500 feet of a navigable waterway, 30.19 regulation is only possible under the "ultimate connection" theory. Ultimate connection is defined in NR 340.02(13) as follows: "Ultimate connection means the joining of a waterway to an existing body of navigable water by means of a natural drainage course or an open or closed conduit, either of which tend to confine and direct flow into the existing body of navigable water."

Regulation under "ultimate connection" requires that:

1. The receiving body of water is navigable.
2. The connection is either by means of an open channel, conduit, or existing watercourse.
3. The constructed waterway is similar to a natural pond. A "waterway" must have some element of potential public use, and does not include concrete swimming pools, sewage lagoons, clarifying ponds, industrial wash ponds, or concrete or steel fish tanks either in ground or above ground. For more information, see the July 16, 1976, legal opinion on this subject.

The constructed waterway must be directly connected to the receiving body of water or we lack jurisdiction. If the applicant simply proposes to run a pipe out of the fish holding area onto the ground, this would not constitute an "ultimate connection" unless the pipe discharges directly into a navigable body of water, or the pipe discharges into an existing watercourse.

Two final points are important. Fish ponds are not considered agriculturally exempt. The latest restatement of this position may be found in 12/12/76 legal opinion by Jim Kurtz, which affirms a 9/11/66 opinion denying agriculturally exempt status to fish ponds. Finally, fish ponds producing less than 20,000 lbs. of fish per year are exempt from WPDES requirements (see Section 122.43 of Volume 43, No. 111 of the Federal Register for details).

In summary, fish hatcheries within 500 feet of navigable waters will be regulated if they have the character of a natural pond. Hatcheries more than 500 feet from navigable water will only be regulated if they are directly connected to navigable water via an open channel, or else meet the "ultimate connection" test as outlined above.

RWR:DH:sm
You have asked a variety of questions regarding the interpretation of terms in Section 30.19, Wis. Stats., and regarding the definition of "pond".

Your first question is, "What is the definition of agricultural use of land as specified in Section 30.19?"
As I indicated to you, we attempted to establish a definition of agricultural use by administrative rule (Chapter NR 340) but were unsuccessful in obtaining the approval of the legislative review committees. I think that for the purposes of our current administration of Section 30.19, the term "agricultural use of land" should be construed in the broadest manner possible.

As I understand the legislative history of Section 30.19, the agricultural exemption was originally intended to allow plowing of land adjacent to streams. However, as you know, administrative practice since Section 30.19 came into being has been substantially more broad than that. Most recently, the Department and representatives of agriculture reached an agreement on the overall concept of "agricultural use of land" in the original version of AB 839. The major distinction was between actions to bring new lands into production as opposed to improvement of existing agricultural land. We did not attempt to precisely define what specific uses of land constitutes agriculture.

The issue which appears to be most troublesome is the exemption of ponds under Section 30.19 on the premise that a pond is not an area of land. I believe that this is too narrow a construction of the statutory intent, and that it ignores over 15 years of administrative practice. While the pond itself may arguably not be a land feature (I believe you would find many people who would disagree with that contention), it is the use of land that the pond contributes to which is of primary importance. Obviously, an irrigation pond enhances the use of land for growing crops. In the same manner, stock watering ponds contribute to the use of land for pasturing and raising of livestock. Particularly with the extensive history of administrative practice along these lines, I do not believe that it is fruitful to seriously question this approach.

I believe that the discussion of "agricultural use of land" also generally answers your question about what types of activities fall under the agricultural exemption. I suggest that you bring specific questions to our attention as they occur.

You also ask whether a permit under Section 30.19 should be required for dredging any artificial watercourse or whether Section 30.20 should prevail. We have consistently held that dredging is regulated under Section 30.20 and that activities above the ordinary high-water mark are regulated under Section 30.19. A 30.20 permit should be required for dredging an artificial waterway which has already received a Section 30.19 permit or where the waterway is connected to a navigable stream. It would be appropriate to consider using Section 30.19 to regulate alterations of waterways within 500 feet of a navigable body of water but which have not previously received a Section 30.19 permit.
You also ask what constitutes a pond. I believe that any pond must meet the definition in Hoyt v. City of Hudson. In other words, a pond must have a discernible bed and banks (this means that it must have a detectable ordinary high water mark).

I have discussed these responses with Mike Cain, and he concurs with them. I have not requested a formal legal opinion since many of the issues are policy matters or have already been dealt with by the Bureau of Legal Services.

RWR: jkb

cc: George Meyer - ADM/5
    Water Management Coordinators
    Mike Cain - LEC/5
    Dick Knitter - WRZ/5
    Ed Brick  WRZ/5
Lake Michigan District has raised the question whether or not a s. 30.20 dredging permit can be issued to clean out an old dug pond lying within 400 feet of the Pike River which has been designated as a wild river in NR 302. This administrative rule was developed to establish a management program for designated wild rivers in the state. More specifically, NR 302.04(3) prohibits dredging from the bed of a wild river (s. 30.20 permit), and enlargements (s. 30.19 permit) within 400 feet of the wild river.

The specifics of the District's situation are these:

1. The pond was dug prior to 1961, which was the year s. 30.19, Wis. Stats., was enacted for first permitting enlargements.
2. The pond is considered to be connected to the river and is a public waterway.
3. The pond is not considered to be part of the bed of the wild river.

Specific language of NR 302.04(3) is:

"No dredging of materials from the bed of any wild river shall be permitted, nor shall channels be connected to a wild river, nor shall an pond or enlargement be permitted within 400 feet of the ordinary highwater mark of any wild river."

The key phrase in this situation is "bed of any wild river." An argument could be put forth is that if the pond is not considered part of the bed of the river, a s. 30.20 dredging permit could be issued. However, past legal opinions have made it clear that both connected and unconnected artificial ponds built prior to 1961 within 500 feet of a navigable stream would require a s. 30.19 enlargement permit if any work is done after enactment of the law (BLS Opinion 9/9/73, BLS Opinion 7/16/76). Subsection 30.19(l), Wis. Stats., requires a permit whenever a person desires to “... construct, dredge or commence to do any work with respect to any artificial waterway, ... pond, lake or similar waterway where the purpose is ultimate connection with an existing navigable stream, ... or any part of the artificial waterway is located within 500 feet of the ordinary high-water mark of an existing navigable stream....” The law does not require a retroactive permit for a pond built prior to 1961, but the intent is to require a s. 30.19 permit if any work is done after 1961.
For this case, if we consider a s. 30.20 dredging permit permissible because the pond is not part of the bed of the wild river, it still requires a s. 30.19 permit which are not permissible under NR 302.04(3). The intent of this rule is to minimize activities within 400 feet of the wild rivers. Under the existing NR 302, we can't allow any permit under 30.19 or 30.20 for this work.

Reviewed by:

Scott Hausmann  
Mike Cain  
Richard Vogt

SH:RV:cb
DATE: May 6, 1985

TO: District Directors (WMC)

PMMS Response
Put in: Chapter 100, Water Regulation Handbook

FROM: Robert W. Roden - WRZ/5

Distribution: All Program Staff

SUBJECT: Interpretation of "Bank" in NR 340.02(2)

We have been asked to provide an interpretation of the definition of "bank" as stated in s. NR 340.02(2), Wis. Adm. Code. NR 340.02(2) defines "bank" as:

"...the land surface abutting the bed of any navigable water body which, either prior to any project or laceration of land contours or as a result of the proposed project or alteration, slopes or drains without complete interruption into the water body."

The reason for defining the term "bank" in NR 340 is to identify those areas that may be subject to the permit requirements of 30.19(1)(c) for grading or otherwise removing top soil from the "bank" of any navigable stream, lake or other body of navigable water where they are exposed by such grading or removal will exceed 10,000 square feet.

This definition of "bank" can cover a wide array of situations and physical configurations. Because this definition is quite broad we have been asked to provide a clearer and more definitive interpretation to aid in the determination of when the requirements of s. 30.19, Stats., and NR 340, Wis. Adm. Code, apply.

We feel that additional clarification is gained through reexamination for the purpose of Ch. NR 340. Section NR 340.01 states:

"It is recognized that serious degradation of water quality, fish and wildlife habitat, and public interests in recreation and scenic beauty may occur during and after the excavation, dredging or grading in or near navigable waterways. It is the purpose of this chapter to minimize the adverse effects caused during and after such activities, to provide for the expeditious rehabilitation of affected land, and to restrict excavation, dredging and grading where the adverse effects cannot be minimized or avoided."

"Bank" has purposely been defined in broad terms to allow application of the requirements of NR 340 and s. 30.19, Stats., to those projects that may appear to be quite remote to navigable waters by may still have serious impacts on those waters.

Problems in determining if the requirements of s. 30.19, Stats., and NR 340 apply to a specific project appear to involve the interpretation of the terms "any project" and "complete interruption" used in the definition of bank.
The term "any project" must be interpreted in the context of the sentence in which it is used. The language refers to the land area "prior to any project ... or as a result of the proposed project or alteration...". It is my opinion that this clearly means that we should determine the "bank" by inspecting the site as it exists at the time of an application. In the event of an after the fact permit (or enforcement action) we should determine what the site configuration was prior to the initiation of the project in question. If previous "projects" on the site, e.g., existing roads, dikes, etc., have "completely interrupted" the flow from this area, we should not consider this area as part of the "bank".

The term "complete interruption" means, in my opinion, that runoff from the area in question would be attenuated to such an extent that impacts to the water body are nonexistent or undiscernible. If runoff from a given area is delayed such that sufficient filtration, infiltration, sedimentation, or other attenuation occurs prior to the runoff reaching the adjacent water body and the effects of the runoff are nonexistent, the area should not be considered to fall within the definition of "bank". This determination will obviously have to be made on a case-by-case basis considering numerous vegetative and hydraulic factors.

Reviewed By: John Coke
Scott Hausmann
Mike Cain

RWR:JC:slh
DATE:  February 17, 1987  FILE REF: 3550

TO:  Jack Donatell - NWD

PMMS Response
Insertion:  Chapter 100, Water Regulation Handbook

FROM:  Scott Hausmann - WZ

Distribution:  All Program Staff

SUBJECT:  Interpretation of ss. 30.19(l)(c) and (d)

You have asked whether or not developers constructing roads for subdivisions (which would eventually be dedicated to a township) would be subject to the provisions of ss. 30.19(l)(c) if the township had an ordinance with strict road construction standards.

The only provisions in ss. 30.19 that would exempt road construction from the requirements of ss. 30.19(l)(c) are found in ss. 30.19(l)(d). The construction and repair of a "public" highway (which would include town roads) would be exempt from ss. 30.19. Although a road can be constructed for ultimate use by the public (i.e., town road), the exemption for construction pursuant to 30.19(l)(d) would not be applicable because the road was not in public ownership at the time of construction.

If the project is located within a county having a population of 500,000 or more, then section 30.19 would not be applicable at all.

In summary, the development of a road for a subdivision prior to dedication to a municipality would be subject to the provisions of ss. 30.19(l)(c).

PSH:DS:el
You have asked whether soil erosion control practices, which are specifically intended to maintain soil productivity for agricultural production, are considered agriculturally exempt pursuant to ss. 30.19(l)(d).

Soil erosion control practices specifically intended to maintain soil productivity for agricultural production would include but are not limited to streambank sloping, seeding and/or sodding, riprapping, spoil spreading (to dispose of borrowed material onto adjacent agricultural land), to level, smooth or improve landscape quality for crop production, floodwater retarding structures, surface water diversion structures, grade stabilization structures, grassed waterways.

The three instances you cite are:

1. Streambank sloping, excess of 10,000 square feet;
2. Erosion control structures ("dams" constructed on gullies that are not considered watercourses and not subject to Chapter 31, but are constructed within 500 feet of a navigable stream); and
3. Grading in excess of 10,000 square feet for the purpose of obtaining topsoil for agricultural use.

In the context of maintaining soil productivity and preventing soil loss, streambank sloping has for the most part been an integral part of streambank protection projects such as riprap. Because most streambank protection projects aid in stabilizing a stream channel, prevent upland soil loss, reduce non-point source pollution and aid in the continued use of agriculturally productive land, it is our opinion that "agricultural uses of land" as defined in ss. 30.19(l)(d) includes streambank sloping projects when the purpose is to maintain the soil productivity and prevent soil loss from adjacent agricultural lands (emphasis added).

Similarly, erosion control structures (dams as identified above) should also be construed as agricultural uses of land, where the purpose of the structure is to prevent upland soil loss from adjacent agricultural lands (emphasis added). These structures will not, except during dam failure, adversely impact waters of the state. More often than not these structures benefit water
quality by reducing nonpoint source pollution and in some cases create additional wetland habitat. Therefore, erosion control structures constructed for the purpose of maintaining agricultural soil productivity and preventing soil loss can also be an exempted activity pursuant to ss. 20.19(l)(d).

The use of topsoil from the banks of a waterway (referred to as spoil material) for the enhancement of agricultural land and associated use would also be considered an agricultural use of land and therefore exempt pursuant to ss. 30.19(l)(d).

Although it is our opinion that these practices are exempt, there may be unique situations where these practices are not for the benefit of adjacent riparian agricultural lands or cause environmental damage. These unique situations warrant applying jurisdiction pursuant to section 30.19 or other applicable statutes when abatement of a nuisance is being sought.

In summary, the language "agricultural use of land" should be construed to exempt soil erosion control practices for agricultural land from the requirements of ss. 30.19(l)(a), (b) and (c).

SH:DS:el
CORRESPONDENCE/ MEMORANDUM

DATE:     April 6, 1987                              FILE REF: 3500

TO: District Directors

Insert: Chapter 100, Water Regulation Handbook

FROM: Robert W. Roden - WZ/6

SUBJECT: Applicability of Section 30.19(l)(b), 30.19(l)(a) and NR 340 to Rotten Granite Extractions

Recently, Scott Hausmann wrote a memo detailing the applicability of several sections of section 30.19, Wis. Stats., and NR 340 to "rotten granite" extractions. While I believe that rotten granite mining is somewhat unique to the North-Central District, many of the items addressed within Scott's memo are applicable to other extractions on a stateside basis. I am, therefore, attaching Scott's memo and suggest that it be distributed to all holders of the Water Regulation Handbook. This memo should be considered as a program guidance and inserted within Chapter 120 "dredging" of tile Handbook.

RWR:KJ:slh
Attachment
9493H
CORRESPONDENCE/ MEMORANDUM

DATE: March 17, 1987

TO: Mitch Zmuda - Antigo

FROM: Scott Hausmann - WZ/ 6

SUBJECT: Interpretation of Statutes, Rotten Granite (Grus) Mining, Non-Metallic Mining Adjacent to Water of the State.

You have requested clarification of the Department's and Corp's jurisdiction relative to rotten granite mining in Marathon County. It is our understanding that this information will be used in a report that you are preparing which will assess the environmental impacts of rotten granite mining and recommend a course of action for the NCD in coping with this particular problem. Because the situation is very specific to grus mining in Marathon County, this memorandum will address those specific issues you described-in your September 19, 1986 memorandum to Bill Smith and subsequent conversations you have had with Dale Simon.

Background Information

Grus mining is a non-metallic mining process for extracting weathered granite which is usually located within an aquifer. As a result, the area to be mined must be dewatered. Dewatering is usually accomplished in one of two ways. Those are:

1. During the mining process, the grus is removed while excavating a pit. The water within the pit is removed using sump pumps which then discharge the water into an artificially constructed waterway, then to a non-navigable waterway, and eventually ending up in a navigable waterway. In some cases, the water is pumped into a non-navigable waterway ultimately draining into a navigable waterway or the water may be pumped directly into a navigable waterway.

2. A deep ditch or channel is constructed through the mine area to dewater the grus deposits by providing a mechanism for groundwater to be removed from the system as rapidly as possible. These channels extend a substantial distance downgradient from the mining area, ultimately connecting with a navigable waterway similar to that described in #1 above.

In both instances, the water being discharged is generally intermittent. The discharges are not usually associated with a high precipitation event because it is groundwater that is being disposed, not diffused surface water. The discharged water is typically turbid and has a high colloidal suspension of sediments. Eventually, these sediments are transported to a continuously flowing watercourse, non-navigable or navigable, where they settle and change the natural rocky, cobble and gravel substrate to one of primarily sand and fines. This reduces macro-invertebrate habitat and eliminates desirable spawning habitat for some fish species. In the case of Freeman Creek, the changes in habitat attributed to the degradation of water quality caused by grus mining could effectively eliminate any spawning habitat for trout.

Additional anticipated biological, physical and chemical impacts are described in your September, 1986 memorandum.

Considering the background information previously described, our response to your questions are:
1. **Question.** Can we assert s. 30.19(1) (b) authority for rotten granite ponds connected to Freeman Creek via man-made channels and non-navigable tributaries when ponds are beyond 500 feet from navigable waters?

**Response.** s. 30.19(l)(b) would only be applicable if the connection from the pond to the navigable waterway was direct. Specifically the connection into the navigable waterway would be below the OHWM providing a continuous connection between the enlargement and the navigable waterway. It is our opinion that assertion of state jurisdiction under s. 30.19(l)(a) could be successfully argued if the discharge was to a non-navigable waterway which ultimately connected to a navigable waterway. The adverse impacts that have occurred on Freeman Creek as a result of the artificially constructed ponds and channels associated with the mining would strengthen the Department's ability to regulate these activities.

2. **Question.** Can we use s. 30.19(l)(c) for grading on the bank when a rotten granite excavation is contributing sediment to navigable water via man-made channels and non-navigable tributaries? The excavations are 500 to 1000 feet from the navigable waters.

**Answer.** Although one could liberally construe the definition of "bank" as defined in NR 340.02(2) and therefore assert jurisdiction pursuant to s. 30.19(l)(c) Stats., our experience is that this liberal definition of 'bank' has not been well received in the courts. Refer to the May 6, 1985 Program Guidance memo by Bob Roden (Interpretation of Bank).

Therefore, we would advise that s. 30.19(l)(a) be applied to this situation for the same reasons explained in Answer #1.

3. **Question.** Does NR 340 apply to rotten granite excavations when a Chapter 30 permit is required.

**Answer.** Yes. In our opinion, the extraction of rotten granite (a weathered rock) falls within the purview of MR 340 if a permit pursuant to Ss. 30.19, 30.195, and/or 30.20 Stats. is required.

4. **Question.** Due to the terms "sand, gravel or rock excavation" in NR 340.01, are we limited to using the code for those specific materials or can we use the code for clay, silt, peat or humus mining?

**Answer.** NR 340 would not be applicable to the materials you described in Question 4 because this code is directed specifically at sand, gravel or rock extraction. However, definitions in NR 340.02 should be used for the Department's administration of all activities regulated pursuant to ss. 30.19 and 30.195, and for all dredging permits or contracts associated with the extraction of sand, gravel or rock regulated by s. 30.20, Stats.

5. **Question.** What jurisdiction would the Corps have in this matter relative to the Clean Water Act, Sections 401 and 404?

**Answer.** The key to your question is whether or not the discharge of sediment laden water, associated with grus mining, into a waterway falls within the jurisdiction of the Corps for depositing fill, into waters of the nation or the EPA (DNR assumed program,) for a WPDES permit for a point source discharge. Based upon our understanding of how the deposit is made into a waterway, the deposit of sediments would be most appropriately regulated as a point source discharge subject to regulation under Chapter 147 Stats. It is our opinion, that the discharge of sediment laden water would not be subject to the provisions of section 404 because that program requires the direct deposit of material into a waterway, much like our s. 30.12, Stats., does. In fact, some general WPDES permits have already been issued for
the discharges associated with grus dewatering operations. It is our recommendation that you consult with your area environmental engineer and review the conditions of any existing permit to see if a change is warranted.

The WPDES requirements would have to comply with minimum water quality standards and associated WQ certification criteria.

If you have any other questions regarding the above information, please contact Dale Simon at 608-9868.

Reviewed by: Dale Simon
Robert Sonntag
Michael Cain

SH:Jah-
54180
DATE: May 6, 1987

In Reply Refer to: 3500

TO: District Directors

PMMS Response
Put in: Chapter 100, Water Regulation Handbook

FROM: Scott Hausmann - WZ/6

Distribution: All Program Staff

SUBJECT: Navigability of Artificial Ponds

The question has been asked "when does an artificially constructed pond which extends onto public land (township road easement) become a public waterway?" We were also asked how the issues of 1) ultimate connection, 2) location within 500 feet of an existing navigable waterway, and 3) the date of original construction influence the jurisdiction of the State.

All of the above issues were in regard to the construction of a private fish hatchery.

Our original draft response to your request has recently been altered by the Hearing Examiner's decision on an application to construct a connected enlargement for the purpose of raising and selling fish. "Aquaculture" has been ruled as an agricultural use of the land, therefore, exempt pursuant to s. 30.19(l)(d) Stats. For this exemption to apply, the facility must have a private fish hatchery license or be eligible to be licensed as a private hatchery [see s. 29.52(4), Stats.].

Because of the Examiner's decision, the pond you cited in your request is considered a private body of water, even though the pond is located, in part on a town road easement.

The only way the pond could become considered a public waterway is through prescriptive use by the public (see 640AG 146, 1975) or if the original use of the pond changed to a non-exempted use requires the pond to be permitted pursuant to s. 30.19 Stats.]

In this particular situation, with the road on an easement, any action by the public must be reasonably related to highway purposes. A person could stand or wade on the bed of the waterway within the right-of-way and engage in such passive activities as bird-watching or enjoyment of scenic beauty. More active pursuits such as boating or fishing are probably not permissible in this or similar cases. In fact, the pond owner could legally construct a fence along his property line to prohibit entrance and use of the pond by the public. On the other hand, if the highway right-of-way was owned by the town, it would seem that members of the public could undertake any activity within the right-of-way which was not prohibited by the town as owner of the property, provided the activity did not unreasonably impair the property rights of the hatchery owner, or of any other owner of a private waterway.

Usually roadways that are utilized as a part of a pond, lake or flowage bank become more subject to damage and may eventually need repair. Knowing this, it would be reasonable to assume that the
township is either not aware that the project will flood public property or if they are, appropriate legal arrangements have been made by the township that would abrogate or mitigate any damages that could result from the flooding of the land controlled by the township.

The jurisdictional issues of 1) ultimate connection, 2) located within 500 feet of an existing navigable waterway, and 3) date of original construction can be clarified by reading Chapter 100 of the Water Regulation Handbook, BLS Opinion 7-16-76, BLS Opinion 12-21-76, 4-29-82 Program Guidance from Roden, 513-82 Program Guidance from Roden, 3-19-85 program Guidance memorandum from Hausmann, and the 4-6-87 Program Guidance from Roden. If you have any questions please contact Dale Simon at 608/267-9867.

Drafted by: Dale Simon
Requested by: Gloria McCutcheon
Reviewed by Bob Sonntag
  Michael Cain
  Bob Roden
DATE: January 8, 1988

TO: District Directors (WMC)

PMMS Response
Insertion: Chapter 100, Water Regulation Handbook

FROM: Scott Hausmann - WZ

Distribution: WRZ Program Staff
District Director (Water Access Coordinator)

SUBJECT: Public Access Requirements - ss. 30.19 and 236.16(3), Stats., Relationship

Attached is an opinion of the Attorney General (OAG-69-87) on applying statutory public access requirements to artificial lakes created within 500 feet of the ordinary high watermark of a navigable stream.

SH:el
Attach.
Drafted By: Attorney General
Requested by: Gloria McCutcheon
Mr. Carroll D. Besadny  
Secretary  
Department of Natural Resources  
101 S. Webster Street  
Madison, Wisconsin 53702

Dear Mr. Besadny:

You have requested my opinion whether statutory public access requirements apply to artificial lakes created within 500 feet of the ordinary high water mark of a navigable stream. You state that a subdivision developer proposes to create two artificial ponds within 500 feet of a navigable stream; your request does not state whether the developer proposes to connect the artificial ponds to the navigable stream. For the reasons which follow, I conclude that an artificial waterway connected with or located within 500 feet of a navigable water is a public waterway to which public access must be provided pursuant to sections 236.16(3) and 30.19(l)(a) and (5), Stats.

Section 30.19 (1)(a) provides:

Enlargement and protection of waterways. (1) PERMITS REQUIRED. Unless a permit has been granted by the department or authorization has been granted by the legislature, it is unlawful:

(a) To construct, dredge, commence or do any work with respect to any artificial waterway, canal, channel, ditch, lagoon, pond, lake or similar waterway where the purpose is ultimate connection with an existing navigable stream, lake or other body of navigable water, or where any part of such artificial waterway is located within 500 feet of the ordinary high-water mark of an existing navigable stream, lake or other body of navigable water.

Section 30.19 (4) authorize the department to issue a permit upon a finding:

that the project will not injure public rights or interest, including fish and game habitat, that the project will not cause environmental pollution . . . , that the project conforms to the requirement of laws for the platting of land and for sanitation and that no material injury to the rights of any riparians owners on any body of water affected will result . . . .

Section 30.19(5) further provides that "all artificial waterways constructed under this section shall be public waterways," and allows the department to condition permits as it finds necessary to "protect public health, safety, welfare, rights and interest and to protect private rights and property."

Section 236.16 sets forth mandatory layout requirements for subdivision plats, specifying minimum lot width, area and street width. Section 236.16(3) requires subdivisions abutting navigable lakes or streams to provide public access to the water as follows:

(3) LAKE AND STREAM SHORE PLATS. All subdivisions abutting on a navigable lake or stream shall provide public access at least 60 feet wide providing access to the low watermark so that there will be public access, which is connected to existing public roads, at not more than one-half mile intervals as
measured along the lake or stream shore except where greater intervals and wider access is agreed upon by the Department of Natural Resources and the department [of development], and excluding shore areas where public parks or open-space streets or roads on either side of a stream are provided. No public access established under this chapter may be vacated except by circuit court action. This subsection does not require any local unit of government to improve land provided for public access.

Your question concerns the interplay between sections 30.19 and 236.1693) and, in essence, asks whether proximity to navigable water converts what would ordinarily be a private lake into a public waterway.

In 64 Op. Att'y Gen. 146 (1975), my predecessor determined that section 236.16(3) does not apply to artificial lakes on private land created by the damming of a non-navigable stream, but specifically limited his opinion to situations not reached by section 30.19. He concluded, 64 Op. Att'y Gen. at 149, "[i]n this instance, to require public access to entirely artificial lakes where the common law confers no public rights would abrogate the common law." Of course, the difference between the facts you pose and the 1975 opinion is the intervention of section 30.19(5), which does abrogate the common law by declaring artificial waterways "public" if they connect to or are constructed within 500 feet of a navigable stream. I must next consider the extent to which the "public waterway" designation alters the private owner's property rights, and ultimately, whether the department may condition a permit on the owner's provision of "public access" to the water.

As a starting point for this analysis, I note that Wisconsin has long recognized an expansive definition of waters protected under the public trust doctrine established by Wis Const. art. IX, § 1. Under this doctrine, the state holds the beds of all navigable waters in trust for its citizens. Although the original purpose of the trust doctrine was to promote commercial navigation, the Wisconsin Supreme Court has expanded it to protect the public's use of navigable waters for purely recreational and nonpecuniary purposes. State v. Bleck, 114 Wis. 2d 454, 465, 338 N.W.2d 492 (1983); Muench v. Public Service Comm., (1952). Natural, navigable waters of this state are thus impressed with the public trust, and all citizens enjoy access to and the full use of these waters on an equal footing. Moreover, private individuals cannot secure title to a lakebed because that title belongs to the state. State v. Bleck, 114 Wis. 2d at 462.

At the other end of the spectrum, our supreme court has held in Mayer v. Grueber, 29 Wis. 2d 168, 176, 138 N.W. 2d 197 (1965), that the beds of artificially-created lakes do not belong to the state:

In the case of artificial bodies of water, all of the incidents of ownership are vested in the owner of the land. An artificial lake located wholly on the property of a single owner is his to use as he sees fit, provided, of course, that the use is lawful.

On the resolution of private versus public lakebed ownership, the facts you pose fall somewhere in the middle. The lakebeds themselves are on private land, yet the close proximity to navigable water which triggers the operation of section 30.19 suggests that it is the connection or merging of shared waters that makes water a "public" resource. (There is no helpful legislative history to aid in construction of section 30.19.) Two Wisconsin cases further refine the boundaries of private and public lakebed ownership, and together suggest a result that protects public rights yet does not deprive the owner of a property interest.

In Hasse v. Kingston Co-operative Creamery Assoc., 212 Wis. 585, 589, 250 N.W. 444 (1933), the supreme court held that an artificial enlargement of a previously non-navigable stream does not confer public rights in the water, placing that case on the Mayer v. Grueber side of the ledger. In an earlier case, however, the court held that public rights attach to the increased surface water created by the artificial enlargement of a previously natural and navigable lake. Mendota Club v. Anderson and another, 101 Wis. 479, 493, 78 N.W. 185 (1999). Even though the public was entitled to the use of the newly-created surface water, ownership of the new lakebed remained in the private owner and did not transfer to the state. The Court reached this result with some rather pragmatic imagery:
Certainly, persons navigating the lake cannot be required or expected to carry with them a chart and compass and measuring lines, to determine whether they are at all times within what were the limits of the lake prior to the construction of the dam.

Thus, according to Mendota Club, it is possible under Wisconsin Law to retain the underlying private ownership of the lakebed even though public rights attach to the new surface water. In my opinion, the facts you present are very close to the Mendota Club case: by virtue of section 30.19, the creation of an artificial lake connected or in close proximity to a navigable waterway creates public rights to use the surface water even though the artificial lakebed remains in private ownership. Support for this result appears in section 30.19 (5) itself, which declares that artificial waterways created under that section are "public"—but does not state that title to the bed vests in the state. In turn, the right to use a public waterway necessarily implies public access, since without it the right is meaningless.

Section 30.19(1)(a) requires a permit not only when an artificial waterway actually connects with an existing navigable water, but also when any part of the artificial waterway is located within 500 feet of the ordinary high water mark of a navigable water body. The statute does not reveal the basis for the 500-foot limit, but Wisconsin cases suggest that the state has a valid police-power purpose in regulating areas located in close proximity to navigable waters as well as connected waterways. In Just v. Marinette County, 56 Wis. 2d 7, 201 N.W.2d 761 (1972), the court upheld a shoreland zoning ordinance which restricted the alteration of lands within 1000 feet of the ordinary high water mark of a navigable lake, pond or flowage. The court reasoned that the special relationship between lands within the 1000-foot buffer zone and the contiguous waterway warrants public trust protection:

What makes this case different from most condemnation or police power zoning cases is the interrelationship of the wetlands, the swamps and the natural environment of shorelands to the purity of the water and to such natural resources as navigation, fishing, and scenic beauty.  

Just v. Marinette County, 56 Wis. 2d at 16-17.

The court's recognition of a valid police-power basis for regulating lands in close proximity to navigable waters lends solid justification to the 500-foot limit in section 30.19(1)(a). In effect, even where an artificial waterway is not connected to a navigable waterway, close proximity creates a presumption of hydrologic connection. The Supreme court reaffirmed its Just v. Marinette County police-power analysis in M & I Marshall & Isley Bank v. Town of Somers, (slip op. at 14-16, November 4, 1987). Thus, the special relationship between navigable waters and lands adjacent to them provides ample basis for the 500-foot limit established in section 30.19(1)(a).

I am aware that recent United States Supreme Court cases consider the issue of whether condition property development on the grant of public access constitutes a taking in violation of the Just Compensation Clause of the fifth amendments. ("[N]or shall private property be taken for public use, without just compensation." Article V, Amendments to the United States Constitution). In Nollan v. California Costal Com'n, 107 S. Ct. 3141 (1987), the Supreme Court invalidated a public easement condition imposed upon a coastal development permit. The Court repeated earlier holdings that "land use regulation does not effect a taking if it 'substantially advance[s] legitimate state interests' and does not 'den[y] an owner economically viable use of his land.'" 107 S Ct. at 3146. In the Nollan case, however, the Court could not identify a legitimate state interest sought to be advanced by the lateral shorelines easement across the Nollan's property to enable the public to travel from one public beach to another. For example, the Court noted that it would see no problem in requiring an easement to permit the public to view the beach if preserving the public's view of the ocean were the state's asserted interest. "In short, unless the permit condition serves the same governmental purpose as the development ban, the building restriction is not a valid regulation of land use but 'an out-and-out plan of extortion.'" 107 S. Ct. at 3148.
The public access condition established by section 236.16 (3) easily meets the test established in Nollan v. California Coast commission. The purpose of a public access requirement is to protect the public's state constitutional right to use public waterways, and access is the sine qua non to the enjoyment of that right. It makes no difference how the waterway become public, whether by operation of law or through connection to a navigable water: the public access condition assures the public’s right to use state waterways. The "legitimate state interest," therefore, is the protection of public rights in water, and, unlike the mandated easement in Nollan, requiring developers to provide public access to the shore advances that interest.

In Kaiser Aetna v. United States, 444 U.S. 164 (1979), the Court held a governmental public access requirement to a preexisting private pond to be a taking. In that case, however, the Court emphasized that under Hawaii law the pond had always been private property notwithstanding its connection to navigable water. More significantly, the Court noted that legitimate takings cases arise only where there is an interference with an "economic advantage" that has the law back of it." Kaiser Aetna, 444 U.S. at 178. In Kaiser Aetna, the developers owned the pond and had exclusive access to it, at least until the government intervened and (after the owners had made costly improvements) declared that the developers must now provide public access. In contrast, under the facts you pose, the developer under section 30.19 has no "right" to created a lake within 500 feet of public waters, where it presumably would impact the quality and quantity of existing waters. The Kaiser Aetna court acknowledged:

We have not the slightest doubt that the Government could have refused to allow such dredging on the ground that it would have impaired navigation in the bay, or could have conditioned its approval of the dredging on petitioners' agreement to comply with various measures that it deemed appropriate for the promotion of navigation.

Kaiser Aetna, 444 U.S. at 179.

Under section 30.19(4) and (5), the state has sufficient authority to deny the developer a permit in the first place without causing a taking. Thus, even under Kaiser Aetna the state certainly may condition its section 30.19 permit on providing public access to a newly-created lake which exists in close proximity to and may have impacts on existing public waters.

Accordingly, an artificial waterway connected with or located within 500 feet of a navigable waterway is a public waterway to which the department may require public access. If this requirement is imposed as a condition of a section 30.19 permit for the enlargement of waterways, it is not a governmental taking under the rationale of Kaiser Aetna and Nollan because the owner has not lost an essential element of a pre-existing property interest and the condition bears a reasonable relationship to the state's protection of public waters.

Sincerely,

Donald J. Hanaway
Attorney General

DJH:MS:bp

CAPTION: An artificial waterway connected with or located within 500 feet of a navigable waterway is a public waterway to which public access must be provided pursuant to sections 236.16(3) and 30.19(l) (a) and (5), Stats.
We have been asked several questions regarding the following scenario: A mine has been abandoned for a number of years. The mine consisted of two ponds, a pit from which they removed the iron ore, and a tailings disposal area.

a) Since the mine has closed down, the open pit is filling with groundwater. This pit may or may not be within 500 feet of a navigable stream. This pit was never permitted under s. 30.19, Wis. Stats.

b) The two ponds are within 500 feet of a navigable stream and were properly authorized according to s. 30.19, Wis. Stats.

c) The tailings disposal area is being reclaimed by vegetation.

Department staff are looking to develop the pit (lake) into a usable resource for the public, which raises the following questions:

1. Q: Will the pit (lake) be a public body of water if the land around the pit is privately owned?
   
   A: The answer to this question hinges on four criteria to determine if it is considered public or private water. These criteria are 1) when constructed, 2) connected or unconnected to navigable waters, 3) within 500' of navigable waters, and 4) constructed for agricultural purposes. The attached flow chart shows how these four criteria relate in the determination of public or private waters. It may be possible that certain facts of a specific case could dictate a different answer of public vs. private than that indicated on the flow chart.

   In the specific case that generated the questions discussed herein, a mining permit was issued under s. 144, Wis. Stats. Because the pit was authorized under s. 144.85, Stats., and the permit did not specify the pit as being authorized pursuant to s. 30.19, Stats., nor did it specify any public ownership or public right associated with the pit, the body of water within the pit would be considered private.

2. Q: Will the pit (lake) be a public body of water if the land is publicly (state or county) owned or there is a public access to the pit?

   A: If all the land abutting the pit became public the entire pit would become public. If only a portion of surrounding land became publicly owned then only that portion of the pit on public lands would be considered public waters. This assumes that the lands abutting the pit that become public include all or a portion of the bed of the waterway. It is possible, as stated in Mayer v. Grueber to convey upland on an artificial body of water without conveying the bed or riparian rights.
3. Q: Will the lake have to accrue use by the public for a period of time (20 years) before it is a public body of water? (In other words, when and how does this body of water become public?)

A: No. The pit could become public through purchase of the property, connection to navigable waters by means of naturally rising water levels or through additional alteration requiring a permit under 30.19 if within 500' navigable waters.

4. Q: Fisheries is considering constructing rock reefs for fish in the pit. Will permits to dump rock in the pond be required? When will a permit become necessary considering the question of when this water becomes public?

A: If the pit is considered private as discussed above, no permit to dump rock (30.12) is needed. If it is public as discussed above, a permit under 30.12 or M.C. 3565.1 approval would be needed. If further alterations are made requiring a permit under 30.19 permit and thus making the pit public waters, any subsequent structures would require a 30.12 permit or M.C. 3565.1 approval.

5. The overflow from the ponds entered the adjacent trout stream which resulted in an improvement of the trout fishery in the stream. Since shutdown, the stream's fishery has decreased because of the lack of water from the ponds entering the steam.

a) Q: Will a permit (Wis. Stats. 30.195) or M.C. 3565.1 approval be required to divert water to the stream from ponds or pit via an underground culvert or open trench?

A: Yes.

b) Q: What about pumping water into these streams from either sources?

A: If the source is private waters as determined above, no 30.18 permit or M.C. 3565.1 approval would be required. If the source is public, unconnected an involves an average of greater than 2,000,000 gallons per day in any 30 day period, a permit under 30.18(2) (b) or M.C. 3565.1 approval would be required. Withdrawal from a public, unconnected source that exceeds a 30 day average of 100,000 gallons per day but is less than 2,000,000 gallons per day would require registration with the Department under Sec. 144.026(3) Wis. Stats.

c) Q: What about allowing any overflow from the pit or ponds to enter the streams without any physical alterations?

A: If due to natural events such as rising ground water levels or high precipitation, no permits would be necessary.

Drafted By: John Coke

Requested By: Ed Bourget

Reviewed By: Dale Simon
  Mike Cain

JC:EB:bp
[Two flowcharts appear here:
Flowchart 100-1, Determining if an existing pond is public water
Flowchart 100-2, Proposed Waterway Construction jurisdiction]
DATE: February 8, 1988
TO: District Directors(WMC)
PMMS Response
Insertion: Chapter 100, Water Regulation Handbook

FROM: Scott Hausmann - WZ/6
Distribution: Water Regulation Staff Bureau of Legal Services


Recently you were sent the referenced Attorney General's Opinion. Some confusion seems to exist about when and if the Department must require public access to artificial waterways permitted pursuant to s. 30.19, Stats.

The opinion of the Attorney General basically makes two conclusions:

1. The Department may require public access as a condition of a s.30.19, Stats., permit if warranted. We must articulate a basis for such a condition which shows, in the words of the Attorney General, that "the condition bears a reasonable relationship to the State's protection of public waters."

2. The public access requirements of s. 236.16(3), Stats., must be met if the property adjacent to a s. 30.19 permitted artificial waterway is subdivided under Chapter 236, Stats. Chapter 236 applies to subdivision of 5 or more parcels of 1 1/2 acres or less at one time or over a period of 5 years.

I hope this clarifies any confusion that might exist. If not, please contact me.

Drafted By: Scott Hausmann
Requested: Ed Bourget
Reviewed By: Michael Cain
1987 Wisconsin Act 374, the new Chapter 30, changed section 30.19 to allow for maintenance dredging of existing authorized enlargements. Now that we've has a little experience with this section several questions have come up which I'll address in this memo.

1. NR 340 regulates non metallic mining and specifies the requirements for review and permitting. How does this administrative code relate to the exemption for work required to maintain authorized enlargements found within section 30.19?

   All existing permits authorized under the old section 30.19 and NR 340 remain unaffected. The status of mining activities issued since adoption of the Act 374 will depend on how the permit was drafted. If the permit cited only section 30.19, the exemption found within section 30.19 is applicable and we could not require a permit for work required to maintain the original dimensions without revoking the original authority. You should note that section 30.07 allows for the revocation of Chapter 30 permits "for good cause".

   When appropriate, future permits for non metallic mining should include specific conclusions of law specifically state within the order section that additional permits are necessary for maintenance dredging of unconnected enlargements.

2. Section 30.07 restricts the length of permits to 3 years with the possibility for a 23 year extension. Section 30.20(2) allows the department to issue contracts and permits for up to 10 years. Since the two statutes conflict, the more specific language in s. 30.20 stats., governs for dredging permits. How will this affect permits issued under NR 340?

   Permits issued prior to the enactment of Wis. Act 374 are unaffected. Permits issued after the enactment are subject to these time frames and must be repermitted upon their expiration. If a permit contains a s.30.20, stats., permit or contract, we can use the longer time frames outlined in that statute.

3. Some harbors are or have been authorized by use of section 30.19. Can the Department retain authority over dredging operations?

   The exemption language within section 30.19 does exclude us from requiring a future permit but we should be able to draft permits to allow our continuing review. For example, a 30.19 permit could be conditioned with a requirement to notify the department of any future dredging and allow for a 30 day review period. I suggest that you use such a provision cautiously and coordinate with the bureau.
4. Some 30.19 permits issued before the enactment of Wisconsin Act 374 specified a sunset date within the permit. How are these permits affected by the exemption from permit for maintenance dredging found within s. 30.19 Wis. Stats.?

We construe any permit limitations issued before the enactment of Act 374 as being valid and unaffected by the exemption specified in section 30.19(lm)(e). It would be unreasonable to assume that specific permit conditions, necessary to protect the water body involved, would be overruled by future statutes. A contrary assumption would force us to anticipate future legislation within the permit process. Therefore, an authorized enlargement with an expired permit date will be considered completed and will require new authorization before maintenance dredging can occur. If no expiration date was specified within the original 30.19 permit conditions, authorization for the enlargement must be considered "active" and the exemption found within s. 30.19(lm)(e) valid.

Reviewed by: Ken Johnson
Robert Sonntag
Mike Cain
Several months ago Bob Roden asked the Department of Justice about the implications of the new agricultural definition found within the Lower Wisconsin River legislation. The new definition, now found within section 30.40(l), fails to include fish farming and forestry. Since recent administrative decisions use the definition within Chapter 91, use of the new definition represents a significant departure from the way we've done business.

Attached is the Attorney General's opinion in this matter which clearly states that section 30.40(l) is applicable. Agricultural use is defined as follows:

“Agricultural Use” means beekeeping; dairying; egg production; feedlots; grazing; floriculture; raising of livestock; raising of poultry; raising of fruits, nuts and berries; raising of grains, grass, mint and seed crops; raising of vegetables and sod farming.

We may have some problems getting the word out to people who are in mid project. However, we ought to start asserting jurisdiction on 30.19 and 30.20 projects not covered by the above definition as soon as possible.

cc: Robert Roden - WZ/6
    Scott Hausmann - WZ/6
Dear Mr. Besadny:

You have asked whether the Department of Natural Resources must consider fish farming and forestry as "agricultural uses of land" for purposes of its permitting authority in section 30.19, Stats. Section 30.19 requires a department permit for the construction or enlargement of any artificial waterway which connects to or exists within 500 feet of a navigable waterway, but subsection (1m)(b) exempts "any agricultural uses of land" from the permit requirement. You point out that fish farming and forestry can have substantial impacts on navigable waters, and you add that the recently-enacted definition of "agricultural use" in section 30.40(l) fails to include fish farming or forestry.

For the reasons discussed in this opinion, I conclude that the department may narrowly interpret the agriculture exemption in section 30.19(lm)(b) to effectuate the resource protection purposes of chapter 30.

Prior to the enactment of section 30.40(l) (1989 Wisconsin Act 31), your department apparently concluded that its administration of the section 30.19(lm)(b) permit exemption was governed by the expansive definition of "agricultural use" contained in section 91.01(l). For purposes of farmland preservation, section 91.01(l) defines "agriculture use" as follows:

(1) "Agricultural use" means beekeeping; commercial feedlots; dairying; egg production; floriculture; fish and fur farming; forest and game management; grazing, livestock raising; orchards; plant greenhouses and nurseries; poultry raising; raising of grain, grass, mint and seed crops; raising of fruits, nuts and berries; sod farming; placing land in federal programs in return for payments in kind; owning land, at least 35 acres of which is enrolled in the conservation reserve program under USC 3831 to 3836; participating in the milk production termination program under 7 USC 1446(d); and vegetable raising.

Section 30.40(l), however, defines "agricultural use" more narrowly:

(1) "Agricultural use" means beekeeping; dairying; egg production; feedlots; grazing; floriculture; raising of livestock; raising of poultry; raising of fruits, nuts and berries; raising of grains, grass, mint and seed crops; raising of vegetables; and sod farming.

The answer to your question, then, turns on whether it is appropriate for the department to utilize this most recent definition of “agricultural use” in its administration of section 30.19 permits, or whether it is bound to the broad definition in section 91.01(1).
The same word is capable of different meanings in different statures and “(t)he ultimate scope of a term capable of a broad or narrow meaning in the abstract must be determined by its context in a particular instance.” Wis. Environmental Decade, Inc. v. DNR, 85 Wis. 2d 518, 271 N.W. 2d 69 (1978). Thus, even though a statute is not ambiguous, a word may have many meanings and “its precise meaning must be found in its context and relation to the subject matter.” Empire Gen. Life Ins. Co. v. Silverman, 127 Wis. 2d 270, 277, 379 N.W. 2d 853 (Ct. App. 1985). And, as noted in Suburban State Bank v. Squires, 145 Wis. 2d 445, 449, 427 N.W. 2d 393 (Ct. App. 1988), “(w)hen multiple statutes are contained in the same chapter and assist in implementing a common object or policy, the statutes should be read in pari materia and harmonized.”

A superficial reading of sections 30.40(1) and 30.19 would suggest that because both statutes reside in the same chapter, the section 30.40(1) definition of “agricultural use” should apply to section 30.19(1m)(b). In County of Dane v. Racine County, 118 Wis. 2d 494, 498, 347 N.W. 2d 622 (Ct. App. 1984), however, the court of appeals cautioned that statutory definitions cannot simply be superimposed on other statutory sections, even if they appear in the same chapter, if the statutory definition is limited to the specific section in which it appears. Thus, we cannot automatically apply the section 30.40(1) definition to section 30.19 (1m)(b) because it expressly applies to sections 30.40 to 30.49, dealing with the lower Wisconsin state riverway. Nor can we assume the applicability of section 91.01(1), as it is likewise expressly limited to chapter 91, “Farmland Preservation.”

We may still, however, examine the subject matter and context of each of the definitions of “agricultural use” appearing in sections 30.40(1) and 91.01(1), to determine which definition the department may use in its administration of section 30.19. Chapter 30 concerns the protection of the state’s navigable waters. As stated in Village of Menomonee Falls v. DNR, 140 Wis. 2d 579, 597, 412 N.W. 2d 505 (Ct. App. 1987), “(t)he free and unobstructed use of the state’s navigable waters is a matter of statewide concern…. Chapter 30, Stats., regulates the area: Applying the narrow definition of “agricultural use” in section 30.40(1) to section 30.19 permit proceedings would advance the resource protection purposes of Chapter 30 by making the agricultural permit exemption unavailable to entities engaged in forestry and fish farming. Conversely, the expansive definition of “agricultural use” in section 91.01(1) is intended to advance farmland preservation, the objective of Chapter 91, and has little relationship to the protection of state waters.

Indeed, even in the absence of the newly created definition of “agricultural use” in section 30.40(1), I question whether the department, in light of the resource protection purposes of Chapter 30, should have presumed the applicability of the section 91.01(1) definition to section 30.19. Where the Legislature has intended the section 91.01(1) definition to apply, it has expressly so stated, as in section 71.58(3) and (4) and 20.29(3)(b).

Further more, if a statute contains a given provision, the omission of such provision from a similar statute concerning a related subject is significant in showing that a different intention existed. Kimberly-Clark Corp. v. Public Service Commission, 110 Wis. 2d 455, 463, 329 N.W. 2d 143, 147 (1983).” Maxey v. Racine Redevelopment Authority, 120 Wis. 2d 13, 24, 353 N.W. 2d 812 (Ct. App. 1984). Moreover, I note that section 30.19(1m)(b) creates an exemption from the normal permit requirement for agricultural users. It is reasonable to assume that in the area of environmental protection—as in the context of tax exemptions—ambiguities in words granting an exemption are resolved against the person claiming the exemption. Kollasch v. Adamany, 104 Wis. 2d 552, 561, 313 N.W. 2d 47 (1981).

Accordingly, I conclude that the context of section 30.19(1m)(b), and the resource protection purposes of Chapter 30, allow the department to interpret the agricultural exemption narrowly, and to apply the section 30.40(1) definition of “agricultural use” to advance those purposes.

Sincerely,

Donald J. Hanaway
Attorney General
GENERAL DESIGN GUIDANCE IN CREATING ARTIFICIAL PONDS OR WETLANDS FOR WILDLIFE

Existing wetlands are usually self-sustaining ecosystems that should not be disturbed or altered to create ponds for wildlife. However, the construction of wildlife ponds can be done on upland sites or occasionally in lower quality wetlands where the wetland and wildlife values could be enhanced.

HIGHER QUALITY SITES THAT SHOULD GENERALLY BE AVOIDED INCLUDE:

Forested Wetlands, Cedar or Tag Alder Swamps, Bogs & Natural Shallow Water Wetlands.

LOCATIONS THAT MAY BE GOOD SITES FOR PROJECTS MAY INCLUDE:

Wet or Previously Drained Farm Fields, Transition Zones Between Uplands and Existing Wetlands & Existing Wetlands which Have Relatively Low Quality.

The following general design features should be considered when constructing a wildlife pond or artificial wetland basin.

1. SIZE. A pond or wetland basin should complement and improve the quality of the habitat that exists naturally at the project site. These projects can vary in size ranging from 0.1 to 2 acres. Keep in mind you will need to place the spoil material on an upland site and that many cubic yards of spoil are generated for even small pond projects. Side casting spoil material into an adjacent wetland area is not allowed because it buries wetland or aquatic plants, alters the hydrology and may destroy fish and wildlife habitat.

2. SHORELINE. An irregular shoreline should be constructed because it can increase the area used by waterfowl and other wetland wildlife species and may provide more isolated bays. Creating these bays, isolated from the rest of a pond, will attract more wildlife and allow them to do more of their daily and seasonal activities, including feeding, loafing, mating and nesting.

3. SHAPE & DEPTH. The bottom contour of a pond should be uneven and rolling. The variable water depths allow for more diverse emergent vegetation in shallow areas throughout the basin. Emergent plants growing in the shallow areas will filter sediment, take up nutrients, and improve water quality. This vegetation also provides food and cover for fish and wildlife. The water depth in shallow areas should vary between 6 and 18 inches and can range from about 4 to 5 feet in the deeper areas. A pond intended for fish will need to be deeper in some areas. A few small areas 10 to 12 feet deep are needed to maintain an adequate oxygen supply through the winter months.

4. SLOPE. The shoreline area should have a gentle slope and provide small vegetated "fingers" and open "bays" along the edge. Slopes should only have about a foot rise (vertical) for approximately every 8 to 10 feet of run (horizontal). Vegetation growing in these edge areas will increase the amount of habitat. Projects with 50% open water and 50% vegetation cover in the wetland basin (including the emergent vegetation around the shoreline) will provide the greatest species richness and diversity.

5. UPLAND SITES. Ponds on some upland sites may require a clay liner to retain water. Topsoil should be placed on the bottom of these basins to provide a more suitable substrate and improve the establishment of aquatic plants and animals. Clay lined basins produce less vegetation, fewer invertebrates and support less waterfowl and other species, than those lined with both clay and organic soils.

6. ORGANIC SOILS. Muck soils that may be available from an impacted wetland can be placed on the bottoms and slopes of newly created basins. This material provides a natural seed bank and is high in organic...
content which will provide for better plant species diversity and increased invertebrate (insect) activity. Invertebrates are an important food source for a variety of birds and mammals.

7. **ISLANDS.** Construction of small earthen islands within larger ponds or newly created wetland basins can increase diversity and provide offshore nesting areas for waterfowl and other wildlife. If islands are constructed, they should have a minimum distance of 120 feet from other shoreline areas to be most effective.

8. **FOOD SOURCE.** Following construction, a layer of hay may be placed in shallow areas along the shore as a food source for invertebrates and microorganisms which will help establish plant and animal populations more rapidly.

9. **BUFFER AREAS.** Buffer areas of upland grass vegetation may need to be established and maintained around the perimeter of these projects to provide the nesting habitat and cover needed by waterfowl. If mowing around the pond or basin is necessary to control woody vegetation during the growing season, it should be delayed until after August 1 to avoid disturbing nesting waterfowl, upland game birds and other wildlife.
POND/ENLARGEMENT WORKSHEET

Definitions

"Waterway" means any body of water declared navigable pursuant to s. 30.10, Stats.

"Ultimate connection" means the joining of a waterway to an existing body of public navigable water by means of a natural drainage course or an open or closed conduit, either of which tend to confine or direct flow into the existing body of public navigable water.

"Prescriptive right/easement" means a right to use another's property which is acquired by a use which is open, notorious, adverse and continuous for the statutory period. The statutory period is generally 20 years. (i.e. trespassing across private land to gain access to an abandoned gravel pit for swimming or fishing).

"Public access" means the right of passage of the public over the surface of common highways that abut navigable waters. (i.e. access gained from a town road ROW that abuts a navigable waterbody. Access to a stormwater management pond in a commercial parking lot would not necessarily constitute public use and accrual of prescriptive rights.

"Connect to" means the direct physical joining of a waterway to an existing body of navigable of water below the elevation of the latter's OHWM where the adjoining is by means of an open channel having a bed and banks.

"Environmental pollution" means the contaminating or rendering unclean or impure the air, land or waters of the state, or making the same injurious to public health, harmful for commercial or recreational use, or deleterious to fish, bird, animal or plant life. (See s. 299.01(4), Stats.)

Legal Exception is From Permit Requirements

1. See s. 30.19 (1 m).
   a) The construction and repair of public highways.
   b) Any agricultural uses of land (i.e. drainage ditches).
   c) Any navigable inland lake located wholly or partly in any county having a population of 750,000 or more (the exemption applies to the entire lake regardless of the county it is located in).
   d) Those portion of navigable streams, Lake Michigan or Lake Superior within any county having a population of 750,000 or more.
   e) Any work required to maintain the original dimensions of an enlargement of a waterway authorized under (a) or (b).

2. See NR 340.035 Exemption. NR 340 does not apply to nonmetallic mining operations of less than 1 acre where the department determines that there is little likelihood for adverse environmental effects. Permits under 30.19 are still required where applicable.

3. Artificial private ponds not connected or ultimately connected (the connection is non-navigable) to a navigable waterway, no prior waterway history, have not acquired prescriptive rights, have no legal access and were constructed prior to 1963 are PRIVATE waterways regardless if they are navigable or not. However enlargements to a private artificial waterway where the activity is within 500 feet of an existing public waterway or ultimate connections to a public waterway after 1963 are regulated under s. 30.19 and would become public if authorized between 1963 and 1988.
4. Municipal or industrial wastewater treatment facilities with exception to cooling ponds are not subject to s. 30.19. (see chapter 100, Water Reg guidebook, BLS opinion - 7/16/76)

Legal Prohibition for authorizing an activity under 30.19

1. See NR 301.04. Relationship of enforcement and permit proceedings.
   (1) The department shall not process After-the-fact permit or approval applications prior to completing enforcement actions if:
   a) The project is causing or is likely to cause environmental damage; or
   b) Department staff have an objection to the issuance of the permit or approval; or
   c) The prosecuting attorney in the enforcement action has not given consent to the processing of the application prior to the completion of the enforcement action.

2. See NR 302.04 Wild Rivers Alterations. (1) No man-made dams or other man-made structures which impound water shall be permitted on the Pike River in Marinette County and the Pine River and Popple River in Florence and Forest County with the exception of projects licensed by FERC and in existence prior to November 18, 1965. (3) Channel Changes, Enlargements, Dredging and Grading. No channels shall be connected to a wild river, nor shall any pond or enlargement be permitted within 400 feet of the OHWM of any wild river.

3. See s. 30.25 Wolf River Protection. No person may make any effort to improve the navigation of the Wolf River north of the southern boundary of Shawano County nor shall any dam be authorized for construction in that portion of the Wolf River. Any order or law authorizing the construction of a dam in the Wolf River in Langlade County is void.

4. See s. 30.44 (3e) Nonmetallic mining within the Lower Wisconsin State Waterway. (if the mining activity were subject to s. 30.19 permit requirements the criteria in this section must also be met before it can be permitted.)

Recent Policy Issues

1. Ponds authorized under s. 30.19 that are ultimately connected and have a continuous flow or discharge should be declared public as a condition of the permit.
2. Dry stormwater management ponds, located within 500 feet of a navigable waterway should not be regulated under 30.19 unless the activity exceed the grading requirements.
TO: Water Management Specialists
Water Management Engineers
Regional Aquatic Habitat Experts
Regional Fisheries Experts
Bureau of Fisheries Management and Habitat
Protection – Rivers and Habitat Protection Section

SUBJECT: Guidance for “After-the-fact” Construction Permits for Fish Farm Ponds

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance cannot be relied upon and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

Summary of Guidance
Fish farmers may seek to obtain an “after-the-fact” permit under Chapter 30 or 31, Wisconsin Statutes or an after-the-fact Water Quality Certification under NR 299, Wisconsin Administrative Code, for an artificial waterbody that has been historically operated as a fish farm. If an “after-the-fact” permit is issued for the fish farm waterbody(s), and the waterbody is not declared public under ss. 30.19(5), Stats. then the fish farm can be exempt from the Natural Water Body permit requirements of NR 16, Admin. Code. This guidance clarifies the permitting procedures and statutory and administrative standards for reviewing after-the-fact permits and certifications for fish farm waterbodies.

Note: Only a minimal number of these after-the-fact applications are anticipated, but fish farmers may inquire or choose to exercise this option to avoid NR 16 requirements in perpetuity. This procedure does not apply to naturally-existing navigable waterways, which are constitutionally public waters and cannot be deemed private by any permit.

Background
In the 1997-1999 Budget bill, DNR licensing of private fish hatcheries was transferred to a DATCP fish farm registration program, which largely removed DNR oversight of fish farms. However, the same legislation also created a new “use” permit in section 29.733, Stats., which requires fish farmers to obtain a permit in order to use a natural body of water as a fish farm. In response to this statute, DNR promulgated NR 16, Admin. Code, Subchapter II - “Permitting the Use of Natural Bodies of Water as Fish Farms”. Effective with a July 1, 2002 rule revision, NR 16 defines “natural body of water” as:

“any spring, stream, pond, lake or wetland that was historically present in a natural state but may have been physically altered over time except any waterbody that has been permitted by the department under ch. 30 or 31, Stats., or ch. NR 299 water quality certification and not declared public under s. 30.19(5), Stats.”
Eligibility of a Fish Farm Pond for NR 16 Exemption

In practicality, there are two ways a fish farm may be exempt from the permit requirements of NR 16:

1. If the waterbody was not historically present as a spring, stream, pond, lake or wetland, then the waterbody does not meet the definition of a “natural body of water”. Fish farming in this type of waterbody is exempt from the NR 16 permit requirement.

2. If the waterbody has been permitted and not declared public as a condition of the permit, then the waterbody does not meet the definition of a “natural body of water.” Accordingly, fish farming is exempt from NR 16 in any waterbodies that have the following permits:
   a) A chapter 30 permit for an unconnected or ultimately-connected pond, where the pond was not declared public pursuant to s. 30.19(5), Stats., as a condition of the permit;
   b) A chapter 31 dam plan approval on a non-navigable stream issued pursuant to s. 31.33, Stats.; or
   c) An NR 299 Water Quality Certification for a pond constructed in a wetland, where certification is required pursuant to Section 404, Clean Water Act and s. 281.37, Stats. (federal wetlands) or s. 281.36, Stats. (nonfederal wetlands).

Reminder, if a fish farmer wants to operate in a natural waterbody, they must either obtain a permit or certification that does not declare the constructed waterbody to be public, or they must obtain an NR 16 Natural Water Body permit to legally operate as a fish farm.

Review of “After-the-fact” Application for a Waterbody Historically Used as a Fish Farm

Applicable Statutes and Administrative Codes: After-the-fact (ATF) permit procedures and standards are set forth in the following statutes and administrative codes:

- Section 30.19, Stats., specifies the requirements and standards for permit issuance of unconnected, ultimately-connected, and connected enlargement waterway permits. For more information and a list of applicable codes, see Chapter 100 of the Waterway and Wetland Handbook, available on the Internet at http://www.dnr.state.wi.us/org/water/fhp/handbook/PDFs/ch100.pdf.
- Chapter 31, Stats., provides requirements for various types of dam permits and approvals. For more information and a list of applicable codes, see Chapter 140 of the Waterway and Wetland Handbook, available on the Internet at http://www.dnr.state.wi.us/org/water/fhp/handbook/PDFs/ch140.pdf.
- Section 404 of the Clean Water Act, s. 281.37 (federal wetlands) and s. 281.36, Stats. (non-federal wetlands), NR 299 and NR 103, Admin. Code, outline the requirements for Wetland Water Quality Certifications.
- Section 30.28(2m)(b), Stats. and NR 300.06(5), Admin. Code, require the Department to charge twice the permit fee for projects that are started or completed without an application for permit or approval being submitted.
- NR 301, Admin. Code, prohibits the Department from processing ATF permits prior to completing enforcement actions under a number of scenarios (see NR 301.04 for specifics).

Permit Fee: If the fish farm ponds or waterbodies were constructed prior to specific regulations that required a permit or approval from the Department, the waterbodies are generally considered legally-constructed and no permit is required. So if the fish farmer voluntarily subjects himself or herself to the current permit requirements and submits an application for an ATF permit, the normal permit fee is applicable. On the other hand, if the fish farm ponds or waterbodies were constructed after the specific regulations were passed that required a permit, then the statute is clear that “twice the permit fee” is charged.
The following dates and fees are applicable:

- After July 27th, 1961 all connected enlargements of navigable waterways required Department approval. As of March 2002, the permit fee is $500, or $1,000 for double fee.
- After September 12, 1963 all unconnected ponds within 500 feet of a navigable waterway and all ultimately-connected ponds required Department approval. As of March 2002, the permit fee for an unconnected pond, not in a wetland, is $50, or $100 for double fee. The permit fee for an unconnected pond located in a wetland, or an ultimately-connected pond, is $300, or $600 for double fee.
- Wetland Water Quality Certification – As of March 2002, the permit fee is $300, or $600 for double fee.

Note, if an original pond or waterbody was built prior to the creation of section 30.19, Stats., but has since been modified without necessary permits (e.g. under 30.19 or 30.20, Stats.), the ATF permit application should be considered to be filed after statutory jurisdiction.

Navigability Determination: If an ATF permit application is submitted, the navigability determination should be made based upon current statutory and common law requirements. Under Turkow v. DNR, 216 Wis. 2d 273 (1998), the court concluded that the Department has the “authority, as well as the obligation,” to determine whether the waters of the state are navigable in fact and therefore subject to regulation. Where the PSC had made a determination historically that this stream was not navigable, it was not “estopped” (legally precluded) from reviewing that determination to make a contemporary jurisdictional determination.

Completeness Review: Depending on the statutory authority for a given application, within 30 or 60 days from the date of receipt, the Department will review the application and provide notice to the applicant of any additional information required to complete the application. Once the application is deemed complete, the Department may not refund the permit fee (NR 300.06(4), Admin. Code). However, the applicant may, at any time before the Department completeness decision, request the application to be withdrawn.

Permit Decisions
For ATF review of ponds or waterbodies under section 30.19, Stats., the decision options are different for ponds or waterbodies constructed prior to permit requirements, compared to those constructed after permits were required by statute.

Ponds and Waterbodies Constructed prior to Statutory Jurisdiction
Since ponds and waterbodies constructed prior to the creation of section 30.19, Stats. are considered legally-constructed, then a voluntary ATF permit application may not be denied – it may only be granted or dismissed.

1. If the legal standards and requirements for such a legally constructed pond or waterbody are not met, then the application should be dismissed. Similarly, for those applications where the legal standards are met and a permit could be issued, but in order to protect the public interest the permit will declare the pond or waterway public under ss. 30.19(5), Stats., the application should also be dismissed.
2. For those applications where the legal standards are met, a permit will be issued, and the permit will not declare the pond or waterbody to be public – draft the permit including conditions and findings of fact. Provide the draft permit to the applicant for their review and comment, prior to issuance of the permit. If the applicant does not agree with the permit conditions, they may request the permit application be dismissed.
Ponds and Waterbodies Constructed after Statutory Jurisdiction

All ponds or waterbodies constructed after the creation of section 30.19, Stats., require statutory approval, so any application must be either approved or denied. If a fish farmer does not want to file an ATF application, or requests dismissal of an ATF permit application for a pond or waterbody that is subject to statutory jurisdiction, enforcement action may be appropriate. In deciding whether to proceed with enforcement, staff will want to consider many factors including: the date of construction; the severity of the unpermitted activity; past, present and potential impacts to the public interest; and whether DNR historically authorized the facility as a private fish hatchery.

Permit Findings and Conditions

If an ATF permit or certification is granted for a fish farm pond or waterbody, you may wish to include supplemental findings and conditions as appropriate. Important issues could include statements about the waterbody(s) not being public water; about the facility being exempt from NR 16 if the waterbody(s) and operations are not changed; about the potential need for new permits if any changes are proposed to the facility or operation; and references to other statutory requirements related to fish farming, such as fish barriers and restrictions on importation of fish. Consult with your fisheries biologist in each case, and contact the Bureau of Fisheries Management and Habitat Protection for sample findings, conditions and other recommendations.

Existing Permits

If a constructed waterbody has already been permitted and the permit declared the waterbody to be public, an individual desiring to start a new fish farm may contact the department asking for a permit modification to allow their waterbody to be considered private. Any such request should be evaluated consistent with current law and program guidance.

Drafted by Liesa Nesta
Approved by Aquatic Habitat Coordinators – June 10, 2002
GUIDANCE PURPOSE AND DISCLAIMER

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A. PURPOSE

Nonmetallic mining projects in or adjacent to navigable waterways are generally large scale intrusions into the natural environment. Because such projects may severely impact public rights and interests in navigable waterways, NR 340, Wis. Adm. Code, was developed to establish criteria and standards to augment regulatory statutes and administrative rules.

B. MECHANISM

The principal mechanism for authorizing nonmetallic mining projects is a permit issued under ss. 30.19, 30.195 and/or 30.20, Wis. Stats. Other statutes that may come into play are ss. 1.11, 23.11, 66.038, 144.01 and 227.11. In addition to NR 340, other applicable administrative codes are NR 1.95, 102, 103, 115, 116, 117, 150, 269 and 504. Coordination with the Bureaus of Environmental Analysis and Review, Solid Waste Management, Water Resources Management, and Wastewater Management may be required. Operators may need to secure permits from the Bureaus of Solid Waste Management and Water Resources Management.

C. HISTORY

1. GENERAL

We are in the midst of what has been described as a minerals crisis, with domestic and world supplies falling short of demands. As a result, we can expect continued strong interest in mineral exploration and other mining activities in Wisconsin and throughout the Great Lakes region. A sharp increase in these activities in the past 10-15 years has already caused conflicts over competing land use values. Public concern is especially strong when mining activities occur near urban areas.

There are several thousand nonmetallic mineral mines in Wisconsin, many on or near water. Mines produce nonmetallic minerals such as sand, gravel, crushed stone, talc, clay, and peat.
Land used for mineral production in 1971 totaled 2,284 acres, or .006 percent of the total area of the state. Average productivity was $36,793 per acre. A report produced by the Soil Conservation Service in 1977 indicates 85,516 acres, or about 0.25% of Wisconsin's surface area, has been disturbed by surface mining.

The sand and gravel industry dates from early settlement days when gravel was first used for surfacing roads. Statistical data on sand and gravel production since 1905 indicate cumulative production of over 1 billion tons. In 1970, there were 440 active sand and gravel operations in Wisconsin. Since 1958, sand and gravel has been the most valuable mineral commodity produced in the state. In 1971, Wisconsin ranked 7th among all states in sand and gravel production.

Stone is mined from various bedrock formations and processed as dimension or crushed stone. Dimension stone, which is used for building and ornamental purposes, must be visually appealing and durable. Crushed stone, which is used as aggregate in concrete and for other construction purposes, must be of proper chemical composition, strength, and durability. Ground limestone is used in agriculture as a soil treatment.

Extensive glacial activity left large deposits of sand and gravel in most Wisconsin counties. Deposits are principally in glacial outwash formations, either at the surface or buried beneath subsequent glacial debris. Drumlins, eskers, and river sediments may also contain valuable deposits of sand and gravel.

Clay deposits are scattered throughout many Wisconsin counties. Most contain lacustrine, estuarine, loess, residual and stream clays of glacial origin. The use of clay in the production of brick and tile was historically significant in the state, but has almost ceased. Clay is becoming increasingly important in landfill construction.

Talc is associated with Precambrian igneous and metamorphic rocks in Wood County. Talc was mined only in 1929 and 1930. The low grade of the material, small size of the deposits, and difficulty in removing impurities from the ore combined to make the activity unprofitable. With changes in market conditions or improvements in purification technologies, talc may become a valuable mineral resource in the state.

Wisconsin contains roughly 2.5 billion tons of peat on one million acres of land, the second largest peat reserve in the United States. Deposits of moss, reeds, sedge and humus peat were formed in swampy areas since the last glacial period and are distributed along the eastern one-half and northern one-third of the state. Peat was considered to be a low-quality source of fuel during the early 1900s. Use has since shifted toward agricultural and soil conditioning purposes.

Peat is the only Wisconsin product classified as a mineral fuel. Minor production of peat for fuel occurred in the early 1900s, and production for agricultural purposes began in 1941. Total production in 1970 was 1,581 tons; cumulative peat production in the state probably doesn't exceed 75,000 tons. Some peat is of very high value due to special processing, packaging, and use as a seed inoculant.

2. **LEGAL**

Prior to NR 340, major rivers were excavated and ponds were constructed adjacent to rivers with little attention to potential impacts to the functional values of the waters. Erosion and sediment control were practically unheard of. By the mid-1970s, problems associated with sand and gravel mining were apparent to Department staff and citizens' groups.

New guidelines were established after public concern focused on the Big Rib River, in Marathon County, where a large number of sand and gravel operations had caused extensive erosion and sedimentation over more than five decades. Then in the late 70s, with public awareness of the problem
already high, the Rush River, a trout stream in Pierce County, was flooded and damaged through a largely unregulated gravel mining operation.

At the prompting of Trout Unlimited, the Public Intervenor toured the sites in Marathon and Pierce Counties. Subsequently, his office petitioned the Natural Resources Board to develop rules for the regulation of sand and gravel mining. This petition outlined areas of concern and became the framework for the original and current code. The Department developed administrative code NR 340 at the direction of the Natural Resources Board.

NR 340 became effective on February 1, 1979 and was revised in September 1991 to correct organizational problems and include nonmetallic minerals listed in NR 340.02(9) (stone, sand, gravel or rock, asbestos, beryl, clay, feldspar, peat, talc and topsoil). NR 340 established the presumption that instream dredgings have negative impacts and places a burden of proof on the applicant to show otherwise. The applicant must also demonstrate that a feasible alternative is not available.

D. STANDARDS

1. STATUTORY STANDARDS

See handbook chapters on ss. 30.19, 30.195 and 30.20 for statutory standards.

2. ADMINISTRATIVE CODE STANDARDS

Following are brief descriptions of potentially applicable administrative codes other than those found in NR 340:

a. NR 102 establishes administrative standards for classification of waterways and water quality standards.

b. NR 103 establishes water quality standards to be applied by the Department in decisions affecting wetlands. NR 103 further specifies the requirements to be used by the Department when determining the potential adverse effects of a project on a wetland versus the benefit to the applicant.

c. NR 115 establishes administrative standards to be followed by counties in their administration of shoreland zoning ordinances.

d. NR 116 establishes administrative standards to be followed by local units of government in their administration of floodplain zoning ordinances.

e. NR 117 establishes administrative standards for municipal regulation of wetlands.

f. NR 150 establishes procedures for determining whether a given project requires an Environmental Impact Statement (EIS). Nonmetallic mining permits may require an environmental analysis; check the type list contained in the rule.

g. NR 269 establishes effluent limitations for stone, gravel and the sand segment of mineral mining and processing.

h. NR 504 establishes administrative standards for solid waste land disposal sites and facilities.

3. NR 340

a. NR 340.015 - Policy - Natural Resources Board policy prohibits channel dredging and immediate bank excavations unless an operator can demonstrate that there are no reasonable alternatives [see
NR 340.02(16) and NR 340.06(6)]. Even if alternative sites are unavailable, an operator may not be able to modify the operation or reclamation plan sufficiently to demonstrate that channel dredging or bank excavation is technically, economically, and environmentally feasible. Facts must be presented to show that a project can be conducted in light of the environmental concerns identified in NR 340.015(1).

b. NR 340.035 - Exemption - The exemption for application of the rule applies only to small operations if we determine there is little likelihood for adverse environmental effects. The known impacts of channel excavation projects would usually prohibit use of the exemption section even for small projects.

If a project qualifies for rule exemption, we still must authorize the project in accordance with the appropriate statutes. Any of the specific rule provisions may be applied to the project to ensure adequate control and environmental protection even when the project qualifies for an exemption.

c. NR 340.04 - Permit Application - For connected enlargements and grading projects, applications must include the name and address of the secretary of any property owners’ association pertaining to the bodies of water affected or, if there is no such association, at least 5 persons who own real property located adjacent to the bodies of water. If fewer than 5 persons own real property adjacent to the bodies of water, the names and addresses of such persons that own real estate so located shall be given.

Applications for a Ch. 30 permit must be submitted on forms provided by the Department (application form 3500-53 and nonmetallic mining application supplement). The applicant should also provide all of the following:

1) A description of the existing natural (vegetative cover) and physical conditions of the site; wetland and floodplain maps with the boundaries of the entire project clearly identified; and drawings and cross sections of the project site.

Information shown on drawings must be referenced to clearly identified, recoverable bench marks, described and located on the plans. If drawings are on paper larger than 8½ by 11 inches, we should require six sets.

The following points must be addressed:

a) Soil and geologic composition of the project site (borings should be required during the early preplanning stages to identify the type of material and size of the deposit);
b) Locations, dimensions and elevations of surface waters;
c) The elevation of ground water throughout the nonmetallic mining site;
d) Cross sections of the entire floodplain of any streams. A hydrologic and hydraulic analysis may also be required to demonstrate compliance with NR 116. Net changes in ground contours in the floodway of a stream that may cause an increase in the 100 year flood elevation, including temporary stockpiling, require a hydraulic analysis. Such changes may also require other action such as amending a flood profile or securing flooding easements to comply with ch. NR 116 or a local floodplain zoning ordinance;
e) Location of manmade features on the site;
f) Detailed plans and narrative descriptions of the nature and extent (dimensions) of any existing excavations, and the dimensions and quantities of stockpiled materials, topsoil and refuse on the site. The location of both temporary and permanent haulageways (roads) should be shown; including their length, width, side slopes, and elevations;
g) Historical and archaeological features, if known;
h) Existing drainage patterns; and
i) Existing topography. Plans of the site should have a contour interval of 2 feet or less if
ground elevations will change and 5 feet or less if ground elevations will not change. A
wider contour interval may be approved in areas of steep topography.

2) A legal description of all land within the project boundary that the applicant owns, leases or
has an option to purchase or lease. Copies of deeds, options to purchase, and lease agreements
must be submitted with the application.

3) An operation and reclamation plan as specified in NR 340.05

4) Evidence that the applicant has applied for or obtained all necessary local, state, and federal
permits and licenses.

5) A statement explaining what the excavated material will be used for (e.g. road construction,
asphalt, ready mix, cement blocks, cement pipe, etc.).

6) A description of any investigation conducted to identify alternative upland sites, and efforts
made to obtain the material.

7) The estimated volume and quantity of material to be extracted, accompanied by adequate
documentation for the basis of the estimates.

8) The Department may require other pertinent information in order to make a decision.

d. NR 340.05 - Operation and Reclamation Plans - The operator must provide an operation
schedule describing the timetable for each sequential stage of a staged operation. The schedule
should include yearly excavation plans over the life of the permit.

Unless reflected in the schedule, cessation of project operations for more than 180 consecutive days
is an abandonment of operations [see NR 340.02(1)].

Each permit application must include detailed plans with drawings describing all of the following:

1) The location, extent (dimensions), depth and manner of operations anticipated for each stage
of the operation including the proposed means of loading and transporting material and the
estimated volume of material to be extracted. Adequate documentation for the basis of the
estimates should be provided.

2) The final site configuration including depth, location and extent (size) of stockpiled materials
and refuse disposal. The various types of material involved should be characterized.

3) The final reclamation plans must detail the manner, time frame and location of:

a) The removal, stockpiling, and protection (erosion control) of all materials in conformance
with the local floodplain zoning ordinance and NR 116. Net changes in the ground
contours of a stream's floodway, including temporary stockpiling, that may cause an
increase in the 100-year flood elevation, will require a hydraulic analysis to be submitted
by the operator if the operation exceeds 5 acres or has an estimated cost exceeding
$125,000. The analysis must demonstrate compliance or determine where flowage
easements or floodplain zoning amendments may be required. Further action such as
securing an amendment to a floodplain zoning ordinance and flood profiles or securing
flooding easements may also be required of the operator before operations can get
underway;

b) Measures to screen the operation from view considering the general shoreland zoning
requirements of NR 115.05(3)(c) and the need for buffer zones of sufficient width to prevent environmental pollution;

c) Grading, and stabilization of the site;

d) Measures for diversion and drainage of both ground and surface water from the site where necessary to protect surface and groundwater from pollution (include details about erosion control measures such as sediment basins, wash water ponds, sediment screens, silt fences, straw or rock check dams, grass waterways, etc.);

e) Measures to be employed for erosion and drainage control of the site, and revegetation. Plans must outline both temporary and final stabilization measures. A diverse, self-regenerative species mixture should be used where consistent with final reclamation. A list of the species for both the seed mixtures and woody vegetation to be planted should be provided. Sources of information on stabilization, erosion control and seed mixtures include:

i) The Department of Natural Resource publication entitled Wisconsin Construction Site Best Management Practice Handbook, with listings for slope and soil type;

ii) The WI Department of Transportation Standard Specifications for Road and Bridge Construction, with minimum seeding requirements for disturbed earth and right-of-ways;

iii) Soil Conservation Service Critical Area Planting Guidelines, with listings for slope and soil types.

The operator may submit alternate seeding mixtures and stabilization techniques designed to achieve stabilization of the site if it can be shown that the methods of the agencies listed above are not appropriate for all conditions encountered.

Revegetation is not necessarily limited to planting of a grass cover; the Department may require woody vegetation (trees and shrubs) in the reclamation plan to offset habitat losses.

4) Estimated cost for progressive, temporary, and final reclamation of the entire nonmetallic mining site.

5) An acknowledgement of continued responsibility for restoration and revegetation of the project site until stabilization has been determined to be adequate by the Department.

6) Other information needed by the Department in order to make a decision.

7) Estimated Reclamation Costs - The applicant must complete an estimate of all related reclamation costs as part of the application. The applicant may use the checklist of typical reclamation costs in the Nonmetallic Mining Application Supplement or provide information on a separate sheet. This information is needed for an environmental analysis and to determine whether the operator must submit a hydraulic analysis as specified in NR 116. These costs will be only a portion of the total project costs.

e. **NR 340.055 - Bonding** - Bonding is required for each site over one acre and multiple sites of less than one acre by the same operator. Governmental units are not required to obtain bonds.

Where the material is used for Department of Transportation (DOT) highway projects, contractors
or permitees may ask DNR to sign off on the project in the fall so they can get paid by DOT for work completed. This is not acceptable because DOT bonds are required for different reasons than our bonds. A contractor should provide two bonds; one to fulfill DOT requirements and one for NR 340 reclamation requirements. According to our code, the reclamation bond may not be released until final site inspection not less than one year or more than two years after project reclamation.

1) Notification - The Department must determine the required bonding level for all operations and notify the operator. Following approval of the permit, and as a condition of the permit, the operator must file a bond with the Department. The bond amount shall be sufficient to cover the cost to the State of hiring a contractor to complete reclamation or progressive reclamation in staged operations.

Upon notification of required bonding levels by the Department, but prior to commencing the project, the operator shall file with the Department a bond conditioned on faithful performance of all requirements of Ch. 30, all provisions of NR 340 and all provisions of the permit. The operator may start operation and reclamation activities only after notification by Department staff that the bond submitted meets NR 340 requirements.

2) Bond Requirements - Bonds must be issued by a surety company licensed to do business in this state. At the option of the operator, a performance bond or a forfeiture bond may be filed. Surety companies may complete the reclamation plan in lieu of cash payment to the Department.

The bond shall provide that it is not cancelable by the surety, except after not less than 90 days notice to the Department in writing by registered or certified mail. The bond must be payable to the "State of Wisconsin, Department of Natural Resources." Not less than 30 days prior to the expiration of the 90-day notice of cancellation, the operator must deliver to the Department a replacement bond. If no replacement bond is provided the existing bond shall remain in effect.

When issuing a permit, use of the non-cancelable bond form shown in the appendix is recommended. This form prevents the permittee from canceling his bond until a replacement bond has been approved or the project has been closed out after a final inspection. This places the burden on the excavator to keep his bonds current.

The bonding level for reclamation or progressive reclamation in staged operations must be the larger amount of either $2,000 per acre or $0.25 per cubic yard of material excavated based on 1989 dollars unless the operator justifies a lesser amount to the Department's satisfaction.

The base of 1989 dollars requires that the bonding level must be adjusted to reflect inflation or the cost of living increases. For 1992, the inflation of 4.6 % for 1989, 6.1% for 1990 and 3.1% for 1991, or a total of 14% (1.046 x 1.061 x 1.031 = 1.144) must be added to the listed rates resulting in amounts of $ 2280 per acre or $ 0.285 per cubic yard. For permits issued after 1992, remember to correct for cost of living adjustments for all years back to 1989.

For per acre bonding, all areas needing reclamation must be considered, including haul roads, stockpile areas, crushing areas, etc.

Bonding for less than the amounts required by the code can only be granted if the operator adequately justifies a lesser amount. Although an operator can usually use his or her own equipment to reclaim the site "at-cost," the bond amount must be sufficient for the state to hire another contractor to provide all necessary services and materials. The bond amount, therefore, should be considerably higher than the operator's cost. One way an operator might justify a lesser bond amount would be to provide a firm proposal by an independent contractor.
to complete reclamation. Such a proposal would have to clearly identify the scope of work and retain liability to ensure that reclamation will be acceptable to the Department at the time of final inspection.

Remember that the bond is on file with us solely in the event the permittee does not properly complete the project and environmental repair work must be completed.

3) Bond Alternatives - Upon written approval of the Department, an operator may deposit cash, certificates of deposit or government securities with the Department in lieu of a bond. Interest received on certificates of deposit or government securities must be paid to the operator. Certificates of deposit must be automatically renewable or other assurances must be provided before the maturity date. Any securities must be made payable to the "State of Wisconsin, Department of Natural Resources."

4) Bond Reevaluation - The amount for progressive reclamation bonds or security deposits may be reevaluated and adjusted either up or down when necessary. Areas that have been successfully reclaimed may be released from coverage. The procedure should follow NR 340.055(1)&(2).

5) Multiple Project Permit Bonding - Any operator who obtains a permit from the Department for two or more project sites may elect to post a single bond in lieu of separate bonds for each site at the time a second site is approved. Any single bond should be in an amount equal to the estimated cost to the state for reclamation of the sites. When an operator elects to post a single bond in lieu of separate bonds previously posted on individual sites, the separate bonds may not be released until the new bond has been accepted by the Department.

6) Calling Bonds, Etc. Due to Lack of Performance - The Secretary has not delegated authority to call bonds. This being the case, this action must be undertaken by the Secretary or a designee. The wording of the specific bond (or other guarantee) is crucial to how we proceed. Bonding companies and others who issue the guarantees will make sure the process follows the exact procedure specified in the guarantee. Program staff should work through the Bureau of Legal Services to start the process. They are the Department's specialists trained to understand and follow the varying procedures and to work with the financial companies involved. They are also legal counsel to the Secretary.

Calling a bond or other financial guarantee is a serious action taken when the permit holder is in violation of the permit and the law. Four options are available to the Department:

- Informally contact the bonding company or other grantor of financial guarantee. Explain that difficulties are being encountered and that formal intervention is being seriously considered. The financial guarantor may be able to influence the permittee to comply with the conditions of the permit;

- Initiate enforcement proceedings through a local court where both forfeiture and restoration can be pursued;

- Initiate an enforcement action to secure a forfeiture and appropriate action to call the bond or other financial guarantee;

- Initiate action to call the bond only.

The proper course of action depends on the seriousness of the violation and the urgency of securing compliance with permit requirements. Field staff, in consultation with central office staff and Department attorneys, should decide what action to take.
In order to prevent excessive delays, we recommend the following procedure:

a) Documentation
   i. Evidence should be submitted that the permittee has been unresponsive to repeated requests to comply with permit conditions or is financially incapable of complying.
   ii. Cite the particular permit condition which the permittee has violated.
   iii. Describe the environmental consequences of permit noncompliance.

b) Request: The request to call the bond or other financial guarantee and documentation should be submitted to the Bureau of Water Regulation and Zoning.

c) Transmit request: Water Regulation staff will review the request and draft a memo to LC for the director's signature requesting immediate action on the request.

d) Final action: LC should be able to take immediate action to call the bond or otherwise secure compliance.

7) Bond Release - The operator's bond must be released if we find, after inspection, that the operator has fully carried out and completed reclamation of the site in accordance with the operation and reclamation plans. The entire project site must be adequately revegetated and stable before we approve release of the bond. Final inspection must be made not less than one year, nor more than two years after the completion of the project, including reclamation. The completion date should be verified with the contractor once the site has been leveled, sloped, topsoiled, seeded and mulched.

If the site is not adequately stabilized at the time of final inspection, do not release the bond since its purpose has not been fulfilled.

Department staff should make annual reports based on site inspection. A report form for this purpose is included in the appendix. The applicant should also submit an annual narrative describing the progress of the operation and reclamation. Progress reports provide good documentation in support of bond release or in the event of non-compliance. All bonds and securities should be returned to the operator via certified mail with a return receipt requested.

8) Abandoned Sites - Bonds for any site abandoned at the time a permit expires may not be released unless it is shown that no operations have occurred at that site and no potential for environmental pollution exists as a result of an operator's actions or inactions.

f. NR 340.06(6) - Permits

(See section titled "Final Disposition" except for noticing requirements discussed below).

Notice Requirements - Within the three authority statutes applicable to nonmetallic mining, only connected enlargements or grading under s. 30.19 specifically require a public notice. However, due to the large scale of these projects and potential impact on navigable waterways, all applications for nonmetallic mining may be noticed in conformance with s. 30.02(2). The Department may issue a notice and/or hold a hearing on any project if the substantial interests of any party may be adversely affected by the proceeding. The party should be identified—either generically (e.g. public rights or interests) or specifically when known—and documented in the file. The notice is unnecessary when the Department elects to go to hearing.

When an operator requests renewal of a nonmetallic mining permit, a public notice and opportunity for hearing are required by rule regardless of the statutory authority [see NR 340.06(2)].
Standard notice wording should be used for public notices of nonmetallic mining proposals. For renewals, the notice should say, "... has applied to renew a permit to ...."

**g. NR 340.08 - Permit Modifications**

1) At any time prior to expiration of a permit, an operator may apply for an amendment or cancellation of a project permit or for a change in the reclamation plan for a site. The application for the amendment, cancellation or change should be submitted by the operator on a form provided by the Department. The application should identify the tract of land to be added to or removed from the permitted site, or to be affected by a change in the operation and reclamation plan. Any increase in the size of the site shall be subject to the notice and potential hearing requirement of s. 30.02. We may deny a permit modification application if the operator is in violation of the existing permit. It is important to properly document any permit modifications in a permit amendment.

2) When one operator succeeds to the interests of another in any uncompleted operation, the Department must release the first operator from the responsibilities imposed by s. 30.19, 30.195, or 30.20 and NR 340 only if:

   a) both operators are in compliance with the requirements and standards of NR 340 and Ch. 30 permits;

   b) the new operator assumes the responsibility of the former operator to complete the reclamation; and

   c) the new operator submits an adequate bond.

**h. NR 340.09 - Permit Extensions** - A permit extension may only be granted one time and only toward the end of a project when permit renewals are no longer needed.

1) A request for a permit extension must be submitted to the Department in writing prior to the expiration date of the existing permit.

2) No permit extension may be granted unless the operation is in compliance with the terms of the existing permit.

3) Permit extensions may only be granted for projects which are expected to be completed within three years.

4) Permit extensions may be conditioned upon correction of any unanticipated environmental damage occurring during the original permit.

5) No public notice is required for permit extensions (see NR 340.09).

**E. PERMIT PROCESS**

1. **JURISDICTIONAL DETERMINATION** There are a couple of areas where extra care is warranted to determine whether a project is subject to our regulations.

   a. **Ordinary High-water Mark** - Because of the generally large size and potential long term impact of nonmetallic mining projects, extra effort may be needed to determine regulatory jurisdiction. The Ordinary High-water Mark (OHWM) of a navigable waterway is the boundary we must
consider when determining jurisdiction. Most nonmetallic mining projects are in or near streams, where the OHWM can be hundreds of feet landward of the normal water’s edge. For this reason, additional time should be planned to locate our jurisdictional limit.

b. Grading the Bank of a Navigable Waterway (s. 30.19) - The definition of bank in NR 340 provides a great deal of latitude for establishing jurisdiction. These three points are key:

1) First, s. 30.19 applies if the area adjacent to a navigable waterway "slopes or drains without complete interruption into the waterway" either before or after grading or excavation.

2) Second, s. 30.19 applies if the natural ground is not excavated but is filled and graded so the area slopes without interruption into the waterway.

3) The statute does not limit the lateral extent that a slope may run from the waterway. However, one must consider the practical application of the statute. Section 30.19 was developed to protect the adjacent waterway. If the closest point of a grading project is sufficiently far from an adjacent waterway that one would not reasonably expect the waterway to suffer any detrimental consequences, it may not be prudent to assert jurisdiction. This limit will vary depending on the particular circumstances of a project. It might be as far as a quarter of a mile, though more often it would be closer to 500 feet. One must use discretion in evaluating the potential impacts.

c. Agricultural exemption under s. 30.19 - Landowners and potential operators occasionally attempt to shield nonmetallic mining from regulation by claiming agricultural use. Several factors should be considered to determine whether this claim is legitimate:

1) Does the final use of the area after excavation directly relate to an acceptable agricultural practice (e.g. a stock watering pond, or grading and excavation to allow construction or expansion of agricultural buildings)?

2) Is the contemplated use reasonable? These examples describe the kind of evaluation used to determine reasonable use.

a) Example 1 - A quarter-acre pond may be adequate for watering several dozen cattle. However, a 5- to 10-acre pond with a pier or swimming raft, dug deep enough to support rainbow trout for fishing, should probably be considered beyond the bounds of what is needed to qualify for the agricultural exemption.

b) Example 2 - A farmer wants an irrigation pond to provide water for 40 acres at a rate of 1" per week. He will need 3.33 acre feet of water. This can be obtained with a 3.33-acre pond 1 foot deep, a 1.67-acre pond 2 feet deep, a 1.1-acre pond 3 feet deep, etc. To accommodate the rise and fall of the groundwater table, a reasonable, adequate irrigation pond might be 6 to 8 feet deep. Such a pond probably would require no more than 0.5 acre.

2. PREAPPLICATION PLANNING

The pre-application planning process is extremely valuable. As a first step, a meeting should be scheduled at the site with the operator. Several points should be addressed at this time, including Department jurisdiction, permit application needs, and statutory or administrative code standards and prohibitions. At this time, we should also identify sensitive areas within the project site, possible “fatal flaws” within the project plan, and potential hurdles or problems anticipated at this very early stage.

This is an excellent opportunity to provide the operator with the Operator's Guide to Nonmetallic
Mining (included in the appendix). The guide contains all information needed by an operator to submit an acceptable application.

Discussions during the pre-planning stage should be documented with follow-up letters.

It should be made explicitly clear that Department staff cannot assure project approval even though the applicant may address all concerns raised during the preapplication meeting. Project approval requires many steps, including complete and acceptable application materials, evaluations by other DNR staff, and possible public hearings.

**Points to Consider and Discuss at the Preapplication Meeting**

**a.** The Department is responsible for the public trust concerns in the state's navigable waters. The protection of a waterway is not based solely on the recreational use it has, but is based on the values of the individual waterway and related resources within a system.

**b.** The analysis of natural environments at proposed excavation sites is a critical part of the preapplication stage. Data on size, depth and type of deposits, surface water, groundwater, vegetation, wetlands, floodplain, wildlife and significant land features must accompany permit applications.

**c.** Since nonmetallic mining in and adjacent to waterways can permanently alter fish and wildlife habitat, the site analysis required of the operator should provide specific information about existing fish and wildlife habitat conditions. The analysis should include the species of birds, land animals, and aquatic wildlife known to use a proposed excavation site. It may be wise to coordinate the preapplication meeting with the local fish and wildlife managers.

**d.** The application must address what precautions will be taken to avoid negative impacts to the existing habitat and describe a plan to provide desirable habitat through reclamation. The following guidelines may be useful in developing these components of the application.

1) The use of woodlands should generally be avoided when sufficient quantities of material can be obtained in less densely vegetated upland areas. When woodlands cannot be avoided, the excavation site might be located in large cover type of homogeneous woodlands. The excavation site could eventually create a wildlife opening if properly reclaimed and vegetated.

2) The ecological importance of terrestrial habitat in floodplains and wetlands is well documented. Alterations to these areas should be avoided, if possible.

3) Riparian zone habitats in floodplains have high primary and secondary productivity for a variety of flora and fauna. These zones develop dense thickets of shrubs, willow and alder, which are intermixed with diverse stands of deciduous and coniferous trees. They are highly productive areas for feeding, nesting, and cover for local fauna. Habitat loss and alteration can significantly lower animal populations.

4) Dry excavation sites located in floodplains generally disturb a greater amount of habitat than wet excavations.

5) Surface mining can add to habitat diversity by varying slopes, elevations and configuration of graded areas during the final grading and reclamation. Plant species should be suitable for final land form variations. Use of annuals, perennial grasses, legumes and woody perennial shrubs and trees should be discussed. Vary vegetation to support diverse populations of insects and birds which feed on them. On excavation sites
surrounded by forests, reclamation to grasses, legumes, shrubs and grain crops will benefit deer, rabbits, and grouse.

6) Design is as important to a good reclamation plan as plant species. The key to good wildlife management is to intersperse annuals, perennial grasses, and legumes with shrubs, woody perennials, and/or conifer trees. Many small irregularly shaped plantings provide more cover and diversity than a few large areas.

7) Once established, annual mowing of perennial grasses and legumes will help maintain the wildlife habitat. Mowing should be delayed until after ground nesting birds are through nesting. Periodic fertilization of the site may be needed to maintain a quality plant cover both for wildlife and erosion control. If the revegetated excavation site is left unmanaged the area will be invaded by surrounding forest area. The degree of plant invasion and growth on reclaimed excavation sites is determined by the type of excavation site and hydraulic stress caused by groundwater. Groundwater close to the land surface can lead to site invasion by aquatic plants and development of a wetland environment.

8) The excavation of wet pits can open up many design opportunities to the operator. An excavation below the water table creating a permanent pond can be designed to accommodate both fish and wildlife.

9) Large excavations into the groundwater that create shallow areas around 12 to 18 inches deep can evolve into wetlands. When creating a shallow wetland pond, configuring the pond with an irregular shoreline and sloping adjacent banks to 5:1 or 10:1 both above and below the water enhances the chance for growth of aquatic plants and wildlife habitat. This type of pond excavation provides the excavator with an opportunity to remove large amounts of gravel below the water table; then backfill with excess silts, loams and sand generated from stripping the site or processing of minerals.

10) The finer textured material can provide a substrate for natural invasion by aquatic plants or reclaiming the site with aquatic plantings.

11) Pond excavations located in the floodplain might incorporate both shallow areas for wildlife and deeper areas for fish. Deeper excavations are important to fish ponds for several reasons. With less light penetration and increased snow depth and ice cover during the winter, aquatic plants in shallow ponds are not capable of producing sufficient ponds oxygen to sustain fish life. The greater depth also allows some degree of thermal stratification.

12) A fish pond should have a 3:1 slope or flatter above and below water to a depth of 6 feet, and at least 25% of the pond area should be excavated to a water depth of at least 12 to 15 feet. The deeper water allows storage of more oxygen through the winter months and will likely be cooler during the summer.

13) To enhance the pond's fish habitat, the operator should avoid excavating a flat pond bottom. Varying the bottom contours provides more diversity, gives fish more living space, and can result in increased fish populations. If the excavator encounters large boulders not able to pass through the crusher, s/he should consider placing them in the pond. The boulders provide diverse habitat for fish and wildlife.

14) Water-logged trees and deadheads are often encountered when excavating a floodplain pond. Instead of piling them up and burning or burying them, the operator can place them along the shoreline to increase diversity and wildlife habitat. If the water-logged trees are placed in deeper water, fisheries habitat can be enhanced. For assistance with designing
fish and wildlife habitat and deciding upon the types of vegetation to plant for enhancement of wildlife, contact your fish and wildlife managers.

15) The applicant should analyze the site for basic visual resource values. Consider the appearance and use of surrounding land. Is the site hilly, forested, open agricultural, residential, park, commercial or mixed use? Ideally, projects should be compatible with or enhance surrounding land uses and visual quality.

16) Visual exposures to the public should be considered. A nonmetallic mining operation visible from a navigable waterway, public road, public land, residential area, commercial area, etc. may be objectionable.

17) Consider preserving existing landforms or vegetation within the project site to completely or partially screen the project from view:
   a) vegetation, including woods, fence rows, clumps of trees and shrubs (remember that some vegetation only provides summer screening);
   b) landforms (hills, mounds, islands) that block the operation from view.

18) Note any scarce or unique landscape features within the project area that are valued for their appearance:
   a) individual trees or stands of large trees;
   b) ponds, sloughs or other water features;
   c) interesting rock formations;
   d) interesting historical artifacts.

19) Evaluate areas within the site that could be visually improved as part of the operation:
   a) removal of old buildings;
   b) reclamation of past excavation scars and debris piles;
   c) reshaping and vegetating poorly developed ponds;
   d) removal of old equipment left from previous excavations.

20) Consider developing management strategies to reduce adverse visual impacts during the operation:
   a) select sites where existing vegetation and landforms will adequately screen activities;
   b) require additional landforms or vegetation as necessary to screen views of the operation;
   c) determine specific locations within the site where the most unsightly activities could be largely hidden from view;
   d) consider long-term needs, such as planting trees and shrubs that will aid wildlife. (To be effective, this will require several years of advance planning);
e) selectively manage existing vegetation on roadside rights-of-way and waterways. Managing existing vegetation is economical, contributes to erosion control, enhances wildlife habitat, promotes scenic beauty and screens operations from view.

21) Various techniques can reduce an operation's visual impacts. The most common totally screens an area from view through dense vegetation or landforms. The effectiveness of vegetation screening varies depending on species, height, crown density and season. Seasonal variations are striking in a deciduous forest, but minor in coniferous stands.

22) In areas that can't be fully screened, excavation and operation activities can be blended with the surrounding landscape to help divert attention. Anything silhouetted against the sky generally draws attention. White on a green landscape is also highly contrasting and noticeable.

23) Consider these blending suggestions:

a) use colors found in the surrounding landscape;

b) locate the most unsightly activities away from landscape features that are most highly valued;

c) use vegetation and/or land forms to reduce an operation's visibility.

24) Excavation sites needn't become waste lands. Discuss final uses and consider options which may be even more valuable than the minerals extracted from the site, such as:

a) a golf course, park or other recreational facility;

b) a forest plantation;

c) a subdivision centered on a newly created pond or lake;

d) a commercial or industrial development.

25) Where camouflage techniques are not feasible, it's especially important to arrange equipment and temporary facilities in an organized pattern instead of haphazardly.

3. FIELD INVESTIGATION

If possible, the field investigation should be used to identify soil type, deposit characteristics, surface water, groundwater, vegetation, wildlife and significant land features, as well as to analyze potential impacts from the proposed mining project.

a. New and Existing Habitat - The analysis of natural environments at proposed nonmetallic excavation sites is a critical part of the field investigation. Mining operations inevitably change the type, quantity, and quality of existing habitat. The operator should try to leave habitats undisturbed whenever possible and create high quality new habitat when destruction of the existing environment is inevitable.

Resource managers should ask themselves these questions when reviewing project plans:

i) What type of habitat is being lost?
ii) What type of habitat is being created?

iii) Will the created habitat be beneficial?

iv) Will ponds be created in an area lacking in ponds?

v) Will the design of the ponds enhance existing habitats and be beneficial to wildlife?

vi) Will an open grassy area be created in a large tract of woodland--an area that could be
used by hawks, deer, etc.?

vii) Are we losing a riparian woodland and creating more open grassy areas where we already
have large farm fields?

b. Endangered Resources: Plants, Animals, Specific Land Formations, Etc. - For information on
Endangered Resources, look at the Natural Heritage Inventory database. Contact your District
Environmental Impact Coordinator about site occurrence. For copies of the database, contact the
Bureau of Endangered Resources (BER). Special restrictions may apply to activities in areas with
endangered resources.

c. Floodplains and Wetlands On Or Adjacent to the Project Site - Boundaries of any floodplain or
wetland adjacent to or within a proposed excavation site must be clearly identified on the
applicant's drawings. If the proposal involves a wetland within the project boundaries, NR 103
must be followed.

Stockpiling in wetlands and floodplains must comply with local zoning ordinances. It may be wise
to mark these boundaries with flagged iron stakes or fences to emphasize this prohibition.

d. Structures - Identify any existing or proposed buildings on the excavation site. Determine whether
the buildings are in the floodplain. If an access road crosses a stream, make sure the applicant has
included all informational requirements for either a culvert, bridge, or ford crossing with the mining
application.

Identify where any crushing operation, asphalt plants, stockpiles, topsoil piles, overburden,
wastewater discharges, or dewatering discharges will be located. Every excavation project needs
work areas for temporary or permanent storage of material. Size of the work areas will vary
depending upon the amount of material processed and stored at the site. A 2-4 acre area is a
common size for any site that needs to accommodate stockpiles, crushing equipment, sorters,
asphalt plants, scrubber ponds and/or a washing plant. Make sure sufficient work areas are clearly
located on the applicant's plan.

Operations which include an asphalt plant will usually need at least two ponds to accommodate
scrubbers needed to comply with air management requirements. Notify Air Management staff if
asphalt plants are proposed. Washing of material will probably require a WPDES permit; contact
the Department's Wastewater program if this is an issue.

e. Aesthetics - NR 340 recognizes that, without adequate controls, scenic beauty may be seriously
degraded during and after excavations. The rule attempts to minimize adverse impacts and
rehabilitate disturbed land. It also restricts excavations in some cases.

The operator should seek to maintain, as nearly as possible, a natural landscape similar to the site's
original appearance. Buffer zones should be required to minimize visual impacts. Be aware of the
existing natural scenic beauty and make sure the applicant's plan adequately protects it.
i. Determine the scenic beauty of floodplain areas visible from the navigable waterway, the scenic beauty of the project site and the effects mining operations will have on both.

ii. Determine the features that add to the scenic beauty of the site, features that are relatively unique along the navigable waterway, and features that would require extensive time for replacement by natural processes.

iii. Determine the reclamation activities that would maintain, restore or enhance the site's scenic beauty relative to its condition before mining.

f. **Buffer Zones** - The applicant's drawings and any permits issued for a project must ensure that a buffer zone design will suffice for the purpose stated in NR 340. A buffer zone is not a place to build a haul road, store strippings, store old barrels, store waste materials, or anything else and should be left undisturbed by mining activities.

The width needed for a buffer zone is subjective and circumstantial. Depending on the trees or shrubs to be used and site topography, a "screening" buffer zone along property lines and highways might acceptably be as narrow as 5 or 10 feet. However, the buffer zone adjoining a navigable stream may need to be several hundred feet wide to effectively act as a sediment trap or minimize the likelihood of a "blowout" during flooding.

The mining of material on the landward side of the buffer zone along a stream will reduce the overall strength of the streams bank to resist the pressures exerted upon it. The width of a proposed buffer zone, the type of material in that buffer zone, channel morphology and vegetative cover determine if a waterway will relocate through an excavation site. Staff engineers can evaluate any analysis the applicants provide to determine if the buffer zone will be breached during a 5, 10, 25 or 100 year flood. Topographic changes in elevation or natural vegetation may provide enough of a break between the waterway and project site to limit the width required for a buffer zone.

Remember to consider the height of proposed stock piles, buildings, etc. when determining if a proposed buffer zone design is adequate. Is the proposed vegetative cover sufficient to hide or distract from these objects? Increasing the buffer zone's width alone may not resolve problems; additional plantings of live woody vegetation may be necessary. The applicant or a qualified consultant or forester should develop a plan for plantings in the buffer zone.

g. **Land Use and Zoning** - The Department's field report should identify present land uses and zoning classifications of the proposed site. Programs such as farmland preservation and swampbuster should also be noted. Discuss the issue of mining agricultural lands with the District Environmental Impact Coordinator.

Compare the present recreational uses of the site, including navigation, with the likely recreational uses after reclamation. The local conservation warden, fisheries biologist, and wildlife manager, as well as local fish and game clubs, may provide valuable information about the area's recreational uses. These sources may be particularly valuable if there is to be a hearing on an application. In some cases the recreational resource created after reclamation (e.g. a public pond, wetland, etc.) can be more beneficial for the public than existing resources (e.g. an open field next to many other open fields).

h. **Stream and Hydrologic Characteristics** - River systems continually undergo changes of position, shape, dimension, and pattern (morphology). In alluvial river systems, it should be expected that over time banks will erode, sediments will be deposited, and other changes to the floodplain, islands or side channels will occur.

Rivers change position and morphology partially as a result of changes in hydrology. Changes may
be very slow or dramatically fast. They can occur as a result of man-made changes in hydrologic (or hydraulic) characteristics, long-term climate changes, or natural climate fluctuations like droughts or floods. Rivers also develop chutes, islands, and cutoff meanders on oxbow lakes through the erosion and deposition process. The lateral movements are also dependent upon vegetative cover, bank stability, flood frequency and land use of the floodplain.

Lateral migration is often so slow as to be unnoticeable over the course of a lifetime. Historical aerial photographs of a project site may reveal channel changes.

1) Aggradation vs. Degradation - Aggradation and degradation are caused by changes in hydraulics or hydrology. Aggradation is the process of raising a land surface by the deposition of sediment. Degradation is the wearing down of the surface of rocky cliffs, strata, streambeds, etc., by atmospheric and water action.

2) Hydrologic Balance - For periods of time, the land and the climate are at balance or equilibrium. The balance, in large part, is maintained by the vegetation that retards erosion and the land and channel slopes that convey the excess water not used by the vegetation or recharged to a deeper aquifer.

a) Watersheds in hydrologic balance undergo, for relatively long periods of time, very little change in:
   i. vegetation
   ii. aquatic Life
   iii. surface slopes and elevation
   iv. channel slopes, sizes, and shapes

b) Hydrologic impacts from surface mining result largely from changes in:
   i. vegetative types
   ii. soils types
   iii. land configuration
   iv. removal of aquifers

c) Hydraulic impacts from surface mining result from changes in
   i. stream slope (gradient)
   ii. sediment size
   iii. sediment load (suspended sediment and bed load)
   iv. water discharge (outflow)
   v. channel width

3) Impacts identified above may result in changes to the following river and groundwater hydraulics:
   a) Increased flooding frequency
   b) Decreased mean annual flow
   c) Increased erosion and sedimentation due to changes in gradient
   d) Removal of overburden below the water table exposes groundwater to pollution and evaporation
   e) Excavation of overburden below the water table on upland sites or in the floodplain decreases water storage capacity while increasing precipitation runoff
   f) Excavation of overburden down to bedrock on upland sites or in the floodplain decreases water storage capacity while increasing precipitation runoff
g. **Water Quality** - The major sources of pollution from most excavation sites is erosion from haul roads, spoil piles, newly excavated areas, wash water discharges, dewatering processes and active excavation itself. Pollution can also occur if fuel, chemicals, oil and grease at an excavation site are not handled and stored properly. If spills occur and are not attended to immediately, surface and groundwater pollution can occur.

Stormwater run-off permits or Wisconsin Pollution Discharge Elimination System (WPDES) permits may be required. Operators should be advised to contact Wastewater staff for any applicable permits.

NR 340 requires operators to develop a pollution-free plan for handling surface and groundwater diversions and drainage from the project site. The plan must list any physical alterations that will impact a stream or any other body of surface water. In the application, an operator should state whether changes in surface or groundwater conditions will be temporary or permanent.

Natural Resources Board policy (NR 102) prohibits authorization of an operation in "outstanding resource waters" that will lower water quality.

1) **Temperature and Dissolved Oxygen Changes** - Temperature and dissolved oxygen content in streams will change if reduction of velocity and spreading of flow over a mined area is reduced. The altered water temperature can influence abundance and diversity of aquatic biota and alter the amount of usable habitat for each species. Increased surface water exposure to solar radiation will increase water temperatures and can lead to a decrease in the amount of dissolved oxygen for aquatic organisms.

The water temperature of unconnected ponds is generally higher than the temperature of the adjacent stream. If a channel is excavated between the pond and stream or if the pond is subject to periodic flooding, the warmer pond water could raise stream temperatures. Ponds with warmer water can be a refuge or spawning site for competitive and undesirable fish species that can enter a stream. This is especially detrimental to cold and/or cool water fisheries. Increased stream temperatures can impact a variety of aquatic organisms besides the fisheries resources. The issue of potential cumulative impacts from increased water temperatures should be addressed when the proposal is reviewed with the fisheries biologist.

2) **Erosion and Sedimentation** - Sediments eroded from excavations contribute to the filling in of lakes and streams. Sediment deposits destroy valuable fish spawning beds, smother aquatic organisms, ruin active springs, hasten lake aging, and also change a stream's hydraulics. Operators must comply with a complete and well developed operation and reclamation plan and take adequate precautions while working their site. The applicant must incorporate temporary and long-term erosion control methods.

Vegetation stabilizes the soil by absorbing the impact of rain drops, reducing velocity of runoff, and allowing precipitation to infiltrate the soil. Vegetation provides both temporary and long-term protection from erosion and should be used in all upland areas disturbed by excavation activities.

One major problem is controlling erosion during germination of a long-term vegetative cover seed mixture. Mulch and a companion crop such as rye or oats should be used along with permanent seeding to reduce erosion.

Vegetation is both economical and effective in stabilizing completed excavation sites. Reclamation may be made more difficult by problems such as steep or barren slopes, fluctuating water levels, or droughty soils. When planning permanent revegetation of
disturbed soils, consider climate, soil type, optimum plant selection for the specific site, fertilizer needs, seedbed preparation, mulching, irrigating and the best time of year for seed germination.

In flood prone areas, it may be especially effective to seed with native species in addition to using riprap, and temporary stabilizers. Mulches provide temporary erosion control and allow native plant species to invade a site but are typically unsuitable for floodplain sites. Jute nets or excelsior mats specifically designed for this purpose are a better choice for these sites.

It may be wise to require that the operator save existing trees, shrubs, and other surrounding vegetation as a condition of the permit. Seeds of these species can also help to reforest the reclaimed project site.

Temporary plant cover and/or mulch effectively protect bare areas from erosion during excavation. In projects with high volumes of surface water run-off, an operator might divert water from the erosive area with a channel leading to a detention basin to trap debris and silt before the surface water enters a lake or stream.

Consult the Department's publication, *Wisconsin Construction Site Best Management Practice Handbook* for additional guidance.

3) Runoff, Turbidity and Light Penetration - Effective erosion control measures include sediment detention ponds, process-water holding ponds, drainage diversion ditches, haul roads, silt fencing, sediment screens, rock riprap, enclosed stockpile storage areas and fuel storage areas. Temporary ponds, diversion ditches, drainage ways, etc., should be leveled, filled, graded and revegetated during the final closure and reclamation of the site unless other special provisions were made in the permit.

Sediment detention ponds sometimes support wetland plants. Vegetating these sites with wetland species may be economically and environmentally beneficial. If detention ponds or any other physical alterations are to be left in place, they must either be approved in the original proposal or through the permit modification process outlined in NR 340.08.

If review of the proposal and effluent limitations listed in NR 269 indicates that water quality will be degraded, the excavation may be restricted to avoid adverse impacts to surface and groundwater. The project location and type of effluent discharge determines whether the operator can discharge under a general permit or be required to obtain a Wisconsin Pollution Discharge Elimination System (WPDES) permit.

The sediment transport capability of a stream has many variables. The fate of sediments entering a stream is affected by variation of depth, flow, particle size, seasonal fluctuation and man-made alterations. The smaller sediment particles classified as clay, silt, or loam, have the most harmful effect on the aquatic habitat. The average stream velocity is capable of carrying suspended solids, except along areas of reduced flow in pools or wider sections of stream.

Many studies have been conducted concerning the effects of silt on stream biota. The benthic communities composed of algae and aquatic invertebrates act as a sensitive indicator of increased siltation. The benthic population will decrease as suspended solids concentrations increase. In an environment of gravel and rock rubble, most organisms find shelter and surface area to grow and reproduce. When sediments fill the spaces in the gravel or cover, the area benthic organism populations are reduced or eliminated. Even very small deposition of silt can cause a serious population reduction. The benthic organisms in a stream comprises a significant part of fish diets and any reduction in numbers will have an adverse impact on fish populations.
Sediment destroys algae by abrasive action and physical smothering and by reducing the light penetration necessary for photosynthesis. Suspended solids are particularly harmful to the reproduction phases of fisheries: spawning, fish eggs, and fry survival. Damage to fish populations may be both immediate and long term.

4) Biochemical oxygen demand (BOD) - The adjacent land uses and location of the excavation site will determine to what extent a pond will be troubled with BOD or chemicals. Unless agricultural runoff enters the excavation or flood waters deposit organic sediment in a pond, you normally should not encounter any immediate BOD problems. Potential BOD effects (primarily oxygen depletion) should be considered if a fish pond results from the mining project.

5) Release of Nutrients - The removal of riparian woodlands adjacent to streams can cause an increase in the amount of nutrient runoff reaching the waterways. The removal of vegetative cover generally reduces the retention time and filtration that normally would either slow down the movement of nutrients or tie up the nutrients.

6) Gas or Oil Storage Areas and Disposal Process - The storage of oil, gas and other chemicals used by the excavators at sites is a common practice. When processing applications for any excavation in the floodplain, you should work closely with the local county zoning office to assure that the applicant would not violate the local floodplain zoning ordinance and NR 116. Check with DNR Environmental Quality staff about potential groundwater problems should a spill occur at the site. A common practice of many operators is to drain waste oils from their excavation equipment directly onto the ground when they change oil and filters. When issuing a permit, include a condition to restrict disposal of waste oils at the site. That may help avoid potential groundwater pollution problems and at a minimum should alert the operators that we are aware of that practice. Remember excavations removing overburden open up windows to the groundwater.

h. Pond Excavations and Fish Entrapment - Pond excavations in a floodplain will entrap fish. Fisheries biologists usually recommend that at least 25 percent of each pond be at least 12 feet deep. This depth creates sufficient volume for retention of oxygen throughout the winter stress periods when oxygen supplies would otherwise be extremely low. The water quality and groundwater flow in the area of the pond will ultimately determine if the pond will retain sufficient oxygen to maintain aquatic life.

1) Public Access to Ponds Entrapping Fish - Department studies confirm that ponds located in floodplains eventually entrap fish. Building dikes or berms around such ponds to prevent entrapment may not be a feasible alternative. If a pond can entrap fish, a public access must be provided by the landowner, per ss. 23.095 and 29.02 and NR 340.06(3)(b). If the project site becomes public property (through donations or sale) the public access requirements will generally be met automatically.

The public access should be dedicated on a recordable document (see the restrictive covenant form in the appendix for a sample). The document should be recorded at the county register of deeds office and submitted with the application and drawings.

Since public access is not required by rule until after reclamation has been completed, it is not essential to have the easement up front. However, it is far less likely to be lost in the shuffle if it comes in with the application. You may also need this document for the environmental analysis required under NR 150.
2) Slope diversity - Department wildlife managers recommend creating slopes in ponds no steeper than 3 feet horizontal to one foot vertical. A ratio of five or 10 to 1 is usually preferred. Wildlife managers also prefer a water depth no greater than three feet. You will have to balance the wildlife manager's request against the fisheries biologist's comments and preferences on any given project. As mentioned earlier, a pond with both shallow and deep areas may provide the best habitat.

3) Creation of Peninsulas or Islands Within a Pond Site - The creation of ponds with meandering shorelines, peninsulas, and islands increases the amount of habitat edge available for fish and wildlife use. Ponds with a greater amount of diversity usually look more natural and tend to blend into the surrounding environment if they are properly reclaimed.

i. Habitat Creation With Waste or Spoil Materials - Often the excavator can create habitat with materials that are normally viewed as waste or spoil products. Instead of burying stumps, logs or large boulders, the operator may want to use them to create fish or wildlife habitat. This solution is often easier and more economical than burying, as well as being environmentally desirable. Stumps, logs and boulders placed along a pond's shore, for example, create visual diversity, increased edge, and loafing spots for ducks and turtles.

Waste material (nontoxic) in many cases consists of nonmarketable clay layers, sand, silts or boulders too large for the crusher. This material either has to be removed from the site or blended into material used for reclamation. In some cases, large boulders can be placed with riprap required for erosion control or placed in an excavated pond for fish habitat.

Proceed with caution when backfilling of an excavated area with clays. Any placement of clay on slopes can create an impermeable layer that will be hard to revegetate. If clays are available, they probably are best used on the shallow end of unconnected ponds. This finer-textured material provides a substrate for growth of aquatic plants beneficial to wildlife.

In cases where sufficient waste material (sand, silts, clays) are not available for backsloping and grading of a vertical cut (high wall), the operator will not be able to excavate right up to project lines. It may be to the benefit of the operator to leave some material along boundary lines for backsloping. This will probably be cheaper than hauling in material from another site to meet setback and sloping requirements.

Overburden piles provide a nucleus for revegetation of abandoned sites. The organics, and particularly the root stocks and slash, facilitate re-establishment of vegetation in localized areas of the site. Overburden piles are used for den loving animals and, because they usually are vegetated, provide habitat for small mammals and birds. Abandoned stockpiles of sand, gravel, or other processed material is not as conducive to providing habitat for burrowing animals. In some cases you may be able to leave small segments of high wall (5 to 6 feet) for burrowing animals and swallow nesting sites.

j. Flood Flow Capacity - Any berms, dikes, or stockpiles on a site could deflect or otherwise modify flood levels and flow patterns or aggravate the long-term hydraulics at a site. Modifying flow patterns and flood levels could lead to modified hydraulic forces in the local reach of the floodplain and cause other environmental damage.

1) Flood Dikes or Berm - The construction of flood dikes, berms, or other similar structures usually has not been an affordable solution for keeping water out of an excavation site. In the past, dikes have not functioned as anticipated. The cost of constructing dikes or berms that will function properly is often prohibitive.

If the proposed development will have a total area that exceeds 5 acres, or an estimated cost
exceeding $125,000, the applicant should be required to provide all computations necessary to show the effect of the project on flood heights, velocities, and floodplain storage. This requirement is found under NR 116.20(2)(a)4. Depending upon the outcome of the study the applicant may be required to secure an amendment to the local floodplain map and ordinance and flooding easements from affected property owners before the Department can authorize the project.

Aquatic biota can be affected by the construction of dikes and stockpiles. Fish can become entrapped behind dikes that impound water. Fine suspended particles (silt, silt loam soils, etc.) resulting from stockpile or dike erosion can adversely affect fish and reduce invertebrate populations.

The location of stockpiled material in the floodplain can have a long-term effect, especially if stockpiles that effect flow patterns and flood levels are abandoned at a site. Removal of all stockpiles must be required in the permit and confirmed prior to the release of any bonds.

2) Groundwater Infiltration vs. Increased Runoff - Changes in groundwater infiltration will depend upon the depth and acreage of an excavation, amount of vegetation removed, and whether the site is openly drained into an adjacent waterway. Runoff increases as you continue to remove vegetative cover and mine the overburden and subsoils, changing the ground elevations along waterways. Once vegetative cover, overburden, and subsoils have been removed, retention of subsurface water that once infiltrated and slowly fed adjacent waterways and wetlands is either decreased or eliminated. The cumulative impact of continued excavations along a waterway will eventually increase downstream flooding.

k. Easements and Leases to Excavate Material - If the applicant does not own the project site, copies of any leases or easements signed by the landowner must be submitted with the application. These are necessary for the environmental analysis.

l. Gas Line or Powerline Crossings - Gas line or power line crossings may warrant careful consideration. They must be protected from scour, exposure, suspension or inadvertent impact or destruction during the excavation process and from operation of heavy equipment on haul roads which pass over them.

m. Dust Creation and Control Techniques - Contact Air Management staff to assure compliance with air quality standards. Fugitive dust from haul road, crushers and stockpiles can be a nuisance.

n. Equipment Noise - Draglines, backhoes, and trucks create noise that can interrupt or alter established wildlife patterns along a river corridor. Does the site have a high wildlife habitat value? If so, try to determine whether the project would temporarily or permanently displace wildlife onto adjacent habitat or cause a decrease in total numbers of animals.

Depending upon the location of the excavation, recreational users and/or local residents may be disturbed by equipment noise. Time of day and/or day of week restrictions may be necessary to prevent or alleviate a nuisance condition.

o. Cumulative and Secondary Impacts - The cumulative impacts of nonmetallic mining on a waterway system, fisheries, wildlife, water quality, public interest in recreation, scenic beauty and river hydraulics depends on the frequency, duration, and locations of existing and future nonmetallic mining operations. Fish and game managers and other staff should be consulted when evaluating potential cumulative impacts. The impacts caused by bank excavation or dredging on a small straight river with a narrow floodplain will be greater than a similar excavation on a large braided river with a wide floodplain. This is due to the larger river's ability to absorb more changes in fish and wildlife populations before habitat depletion or changes to the river's hydraulics are
noticed.

The impacts of continued removal of the wooded riparian corridor, especially in highly developed areas where riparian wood lots are limited, must also be considered.

4. OTHER SOURCES OF INFORMATION

a. County Soils Maps - See your local Soil Conservation Service (SCS) office for current copies of SCS soil maps and wetland maps.

b. DNR Air Photographs - Contact your local DNR forester to determine if air photographs are available for your counties. Limited coverage may also be available through the forestry section of local paper mills or local forestry consultants. If the project is located in or near a national forest, the U.S. Forest Service may have current and/or historical aerial photographs.

The Wisconsin Wetland Inventory has black and white infrared aerial photos of the entire state taken in 1978-79. The scale is 1:20,000. Call 608/266-8852.

Limited air photograph coverage for selected counties is presently located at the Tomahawk DNR office for 1978, 1979 and 1980. Older DNR air photographs formerly stored at the Tomahawk DNR office are now at the Arthur H. Robinson Map Library, UW-Madison. Call (608) 262-1471.

c. ASCS Aerial Colored Slides - Most Agricultural Stabilization and Conservation Service (ASCS) offices take colored aerial slides of their county each year for crop subsidy programs. Some only take colored slides of the crop land; others fly the entire county. The slides usually cover one square mile and can be viewed at your local ASCS office. Since slides are in color and the county is flown each year, the information can be very valuable when trying to determine past history or the size of a project site or excavation. Slides can usually be purchased for $1.00 at the ASCS office.

d. ASCS Aerial Photographs - The ASCS agent in each county has black and white or color photographs. Usually these cover the entire county.

e. Wetland Maps - DNR wetland maps and SCS wetland maps.

f. Floodplain Maps - Available for review at local zoning offices.

g. Department of Industry Labor and Human Relations (DILHR) - DILHR has a listing of all excavators who mine material in the state of Wisconsin, as well as a list of mining sites.

h. Relevant Publications - Described throughout this chapter.

i. Department of Transportation (DOT) - Retains negatives of all aerial photographs produced for the Wisconsin Wetland Inventory. Contact prints on photographic paper (9" x 9") may be purchased for $3.50; enlargements on diazo paper (24" x 24") may be purchased for $2.00. In both cases, add $2.50 for shipping. Call 608/266-0309 to order (inquire about current prices).

j. Department of Revenue (DOR) - Retains computerized lists of nonmetallic mining sites (includes sites which are not located adjacent to waterways).

F. TYPES OF EXCAVATION/RECLAMATION OPTIONS/PROBLEMS

1. TYPES OF EXCAVATION
a. Upland Excavations: dry pits and ponds.
b. Floodplain Excavations: unconnected ponds, connected ponds, and dry pits.
c. River Channel Excavations: dredging, channel enlargement and gravel bar removal (middle, point, and lateral bars).

2. RECLAMATION OPTIONS

a. Restoration to original condition.
b. Rehabilitation of some desirable characteristics.
c. Development of ecosystems unlike the original, but desirable for various reasons.
d. Natural reclamation when evidence suggests that unaided natural processes will produce better results than human intervention.

3. COMMON RECLAMATION PROBLEMS

a. Lack of topsoil.
b. Droughty soils.
c. High groundwater imposes hydraulic stress impeding vegetative growth.
d. Excavations in the floodplain inundated by floodwater, entrapping fish and impeding vegetative growth.
e. Shallow bedrock areas impossible to revegetate.
f. Exposed bedrock cannot be revegetated.
g. Lack of operator's technical skill to revegetate sites.

G. REASONABLY EXPECTED IMPACTS FROM NONMETALLIC MINING

1. A DRY UPLAND EXCAVATION COULD BE DUG WITH THE FOLLOWING EXPECTED IMPACTS

a. Removal of existing vegetation will alter existing habitats.
b. Erosion of upland excavation sites will increase deposits of sediments in surface water.
c. Excavations that remove overburden (part of the aquifer) can decrease stream flow but increase groundwater recharge.
d. Removal of overburden will increase potential for groundwater pollution.
e. Excavation of overburden down to bedrock will decrease groundwater aquifer capacity, water retention, and mean annual flow of streams. It will increase surface water run-off and, possibly, flood frequency.

2. AN UNCONNECTED POND COULD BE DUG WITH THE FOLLOWING EXPECTED IMPACTS

a. Less material may be obtained from an unconnected pond than from a connected pond because a portion of the bank would not be removed. However, pond excavations disturb less surface area to obtain a given amount of gravel than surface grading above the groundwater.
b. Fish entrapment could occur in unconnected ponds constructed in the floodplain. Fish entrapment in a private pond is inconsistent with ss. 29.02 and 23.095, unless public access is provided.
c. A pond excavated away from an active river channel should cause little or no change to the natural hydraulic process of the channel. Where pits are seasonally connected to a channel, some change to the hydraulics of a river can occur. The most obvious alteration occurs during spring break-up when high water flows throughout the floodplain.
An unconnected pond in the floodplain will fill with flood water during high flows. The pond could eventually connect to the river channel due to erosion. Eventually this could reroute river flows through the excavation site.

d. An unconnected pond excavation located on the inside bend of a meandering stream, is more likely to cause permanent alterations to flows. Even if undisturbed buffer zones separate the pond from the river channel, flood water can overflow the site and exit into the downstream reach of the meander surrounding the site.

If a buffer zone is structurally unstable, erosion can cause a breach to occur, thus connecting the pond to the active river channel. For a meandering stream, the down valley distance through a pond on the inside of a bend is shorter. Consequently, there would be a tendency for permanent redirection of river flow through the excavated site and eventual cut-off of the main channel.

e. Excavation of an unconnected pond does not usually affect the water quality of the active river channel. However, the water quality may be different in the pond than in the river channel.

During open water conditions, the pond will typically have higher temperatures than the river. Also, the dissolved oxygen levels tend to be lower in the pond than in the river channel and sometimes stratification of both temperature and dissolved oxygen can occur in the pond.

The river channel can relocate through a pond if the buffer zone is not large enough or durable enough to withstand erosive forces. In situations where the river channel flows through the pond, the difference in water quality of the river and pond environment could be less. The difference depends upon the pond size and degree of mixing.

f. The difference between aquatic biota in the active river channel and pond site is dependent upon the opportunity for exchange of organisms. Those ponds that are separated from the river have little potential for exchange and are typically less productive.

The likelihood for injection of nutrients and organisms into a pond site by flood flows depend on site location and design. If the pond is located in a floodplain but surrounded by a broad undisturbed wooded buffer zone, the productivity may be low.

g. The effects of excavating an unconnected pond on the scenic quality of an area is totally dependent upon the diversity of a floodplain's environment and project design. A pond has less effect on the scenic quality of an area where oxbow lakes occur naturally than on areas where these types of aquatic systems do not occur naturally. The excavation of a pond with angular perimeters that ignore the natural contours of an oxbow lake, will have a high visual contrast even in areas where oxbow lakes occur.

h. Excavation of a pond exposes the groundwater and removes a portion of the watershed aquifer. Removing a portion of an aquifer decreases mean annual flow, increases flood frequency, and decreases filtration of water entering the remaining aquifer.

i. Upland woodland or riparian woodland habitat may be converted to aquatic habitat.

3. **A CONNECTED POND COULD BE DUG WITH THE FOLLOWING EXPECTED IMPACTS**

a. Wildlife habitat in either the floodplain or upland could be lost.

b. Excavation of a pond connected to the river channel could cause changes to the river hydraulics.

c. The river bank between the pond and the river would be partly excavated for the outlet channel.
The river flow could reroute through the pond both during and after flooding. The relocation of a stream through a pond increases sedimentation and causes a loss of river habitat.

d. The impact upon aesthetics would be greater than for unconnected ponds, because the excavation would be visible from the river at the connection. If the river rerouted through the pond, additional degradation of the aesthetics would occur.

e. The connected pond may have habitat potential for fish and/or wildlife, depending upon the size, depth, and side slopes. A variety of side slopes and depths could produce habitat for both fish and wildlife. The wildlife habitat of a pond environment will be different than the wildlife habitat provided by the natural riparian or upland vegetation prior to any excavations.

f. A connected pond located in the floodplain will be inundated when high water flows spread throughout the floodplain. Erosional processes at the pond's upper end could cause another connection between the pond and the river. This could significantly enlarge the river channel if flows are rerouted through the excavation site. The loss of natural stream habitat and the different environment provided by a pond will have an impact upon fish populations and species make-up.

g. The differences of aquatic biota between the active river channel and pond site are dependent upon the opportunity for exchange of organisms. Ponds connected to the river channel through either inlets or outlets provide a greater opportunity for exchange of organisms between the two systems. The likelihood for injection of nutrients and organisms into a pond site by flood flows is dependent upon site location and design.

h. The still water in a pond is generally warmer than the river waters, providing conditions for productivity of various aquatic organisms. Fish well-suited to still water environments, such as northern pike, can utilize the pond for feeding and spawning. Excavation of a pond near trout water may lead to the introduction of less desirable fish species in the trout streams, which may compete with native species.

i. The potential for ponds to provide a more diversified fish community in the river also exists because of the connection between the two systems. This increased community diversity may be restricted to the reach of river immediately adjacent to the pond site. Depending upon the river type, a pond may cause negative impacts to the fisheries population and diversity.

j. Pond depth and design are important to fish utilization. Obstructions to movements are not a factor during open water periods if an outlet is available for fish movement between the river and pond. Fish entrapment may occur in winter if ice cover on the channel limits or stops fish movement. Fish survival will then depend upon sufficient depth and water quality entrapped pond.

k. The creation of a pond in a floodplain constitutes a major change to the local terrestrial environment. Pond excavations are usually situated on a vegetated floodplain; consequently, terrestrial habitat is almost always destroyed. The depth of pond excavation and permanent inundation that result also greatly retard or prevent the long-term reestablishment of pre-disturbance conditions. What most frequently occurs is the creation of a more diverse habitat with moderate changes in the faunal communities.

l. The creation of a pond in a floodplain containing a meandering river with oxbow lakes will merely add to the habitat diversity in a localized area. Where ponds are located in floodplains lacking oxbow lakes, the effect is again principally local but has implications for a much larger system.

**Example:** A pond may attract migrant waterfowl and shorebirds and provide habitat suitable for nesting and rearing that did not previously exist. The higher aquatic productivity of some ponds may provide food for those species adapted to feeding in ponds and lakes. In some cases the loss of
terrestrial wildlife habitat for certain species may be more significant than the benefits.

4. **A DRY SHALLOW EXCAVATION IN THE FLOODPLAIN COULD HAVE THE FOLLOWING EXPECTED IMPACTS**

a. Fish entrapment would occur on excavation sites not drained by a channel to the river. Once the floodwater recedes, the shallow temporary pool would not be capable of supporting fish life. This would be inconsistent with ss. 29.02 and 23.095.

b. The floor of the shallow excavation and immediate slopes would not be useable by wildlife for nesting due to periodic flooding.

c. The floor of shallow excavation near groundwater will never revegetate to the original cover type. The hydraulic stress created by high groundwater impedes both planted or invading vegetation from totally revegetating a site. If adequate quantities of either organic or silty soils are in place on areas with high groundwater, wetland plants will probably invade the site.

d. The excavation of a shallow basin open to the river could alter the river hydrology, depending upon location and size of the project.

e. The river channel could relocate through a shallow excavation site or be relocated by the excavator. The speed at which a river relocates is dependent upon site location, size, and erodibility of buffer zones left between the river and excavation site. The reclamation and replacement of a river channel to its original channel is almost impossible, and a very costly task for both the Department and operator. Situations where a river channel could possibly relocate or are proposed to be relocated should be avoided.

f. Shallow excavation sites separated from a river usually disturb more vegetative habitat than other types of excavations because comparatively small quantities of material are obtained per surface acre.

g. Wildlife habitat in the floodplain may be lost, depending on the project size and location.

h. A dry shallow excavation located in a wooded floodplain will have a high degree of visual contrast with the surrounding environment. The final configuration of the excavation, extent of revegetation, types of species, and height of the vegetated border will determine the degree of contrast.

i. Stockpiles of excavated material and overburden in the floodplain will contribute to the sediment load during periods of flooding and high precipitation.

5. **DREDGING OF MATERIAL FROM RIVER CHANNELS CAN CAUSE THE FOLLOWING IMPACTS**

a. The substrate is changed from rock or gravel to sand and silt.

b. Benthic organism populations and species diversity are adversely affected by the change in substrate from rock or gravel to sand and silt.

c. Increased turbidity from dredging may contribute to the reduction of benthic organisms. This is due to an increased drift rate caused by turbid water. The overall immediate effects of turbidity on fish will probably not be significant if sediment load is below 25 ppm.

d. The gamefish population is decreased, while rough fish populations increase.
e. Fish habitat would be altered decreasing the amount of undercut banks, spawning areas, pool:riffle ratio in the river, vegetation on the banks, and quantity of rock rubble substrate.

f. The removal of the bed's coarse fraction reduces the degree of control played by rock and gravel to armor and stabilize channel patterns and bed form. The coarser fractions, particularly rock rubble or gravel, armor the bed and retard excessive scour, stabilize banks and bars, and ultimately lowered sediment movement. Removal of the gravel armor can lead to erosion and loss of control. As a result, meandering reaches may become braided due to increases in velocity and bed material transport. Localized hydraulic changes may cause deterioration in an adjacent reach of the river. The hydraulic equilibrium of the river is disrupted by the effects of dredging, including bank erosion, head cutting, shifting of channel and decreased armoring of the bed. In braided systems, the channel generally shifts throughout the active floodplain on an annual basis. This is due to the lateral instability of the channels.

g. Reduced velocity of water entering the dredged area will cause deposition of both bed load and suspended material (aggradation). This will aid in replenishing the gravel removed from the site. When dredging is done in the active channel, the replenishment rate is high compared to other areas in the floodplain. However, the duration of a dredging operation and the size of the project site leads to a related decrease in particle size and quality of material.

h. Dredging can cause hydraulic changes both upstream and downstream. The degree of change depends on the extent of dredging, changes in elevation, types of substrate and amount of the natural river bank disturbed by the project. The natural hydraulic forces changed by dredging can result in increased velocities upstream resulting in increased sediment transport capacity. Because of dredging, the channel bed is steepened in a short reach immediately upstream. This causes erosion and a general upstream progression of the steepened slope (degradation). The erosion will continue upstream until equilibrium is reached. Because the dredged area absorbs the normal bed load of the stream, equilibrium is lost downstream of the project too. To be in equilibrium streams must carry some bed load. To again achieve equilibrium, scour and erosion will be accelerated downstream.

i. In-channel dredging has little or no effect on aesthetics unless riffles are removed or large areas of the bank or gravel bars are denuded of vegetation and graded. Removal of bank vegetation normally occurs on dredging sites.

j. Upland wildlife habitat would receive minimal disturbance. Wildlife located in habitat adjacent to the dredge site may be displaced while the site is being dredged.

k. Dewatering of dredge material requires stockpiling in the floodplain. Stockpiles in the floodplain may not conform with NR 116. Dewatering of the stockpiles may increase the sediment load in the waterway.

l. Dredge holes could be dangerous to the public who use the river.

m. Sediment deposited in dredged areas could lower dissolved oxygen if the biological oxygen demand of the silt is high.

n. A change in river hydrology may cause a decrease in mean annual flow.

o. Living space for fisheries is increased for a short period until sediment deposition fills in the excavation site.

p. Vegetation is depleted or altered by equipment working along the shoreline.
q. Hydraulic dredging can increase turbidity in the stream and at the site of the retention basin if the retention basin was not properly designed.

r. A break in the transfer pipes used for hydraulic dredging could lead to increased water turbidity and filling of a wetland or floodplain.

s. Improperly designed and improperly sized retention ponds used as settlement basins for hydraulic dredging can lead to increased water turbidity and wetland or floodplain filling if the dike around the pond either fails or is overflowed.

t. The excavation and dredging of point, middle, and alternate gravel bars are expected to cause the following impacts:

1) The material site along with equipment and stockpiled material would be inundated temporarily during high flows.

2) The river flows would spread out over a wider area reducing velocity and causing deposition of suspended solids and bed load materials. The deposition would replenish material on the excavation site. However, a reduction in channel stability could occur after site closure. This can be detrimental to the establishment of permanent biotic populations, in particular, benthic organisms. Finer textured materials would likely be deposited in these dredged areas; thus, changes in the structure of benthic communities could be expected. These species changes would be from organisms adapted to coarse substrate to those able to exist on a finer textured, less stable substrate.

3) The immediate impacts on large rivers can be relatively less for removal of a given amount of gravel than the impacts upon a small river.

4) The spreading of water over a wide reach of the river and reduced velocity can change water temperatures during the open water season. The altered water temperatures may influence the abundance and diversity of aquatic biota by altering the amount of usable habitat for particular species.

5) The removal of islands (middle gravel bars), point gravel bars, and alternate gravel bars with a vegetative cover can affect the scenic quality of an area. The aesthetic effect can be quite noticeable due to the visual contrast with the natural condition, both upstream and downstream from the excavation site.

6) The excavation of unvegetated point, middle, and alternate gravel bars would not have as great an impact upon aesthetics. The visual contrast of barren gravel bars should not differ from the visual contrast an excavated gravel bar would project. A minor visual contrast could exist due to changes in the form, lines, color, and texture caused by the excavation of an unvegetated gravel bar.

7) The magnitude of impacts to the environment depends on the river's configuration (straight, sinuous, meandering, split or braided) and the size, location, and extent of the proposed excavation. Excavating or dredging on a small straight river with a narrow floodplain will be more noticeable than a similar excavation on a large braided river with a wide floodplain. This is due to the larger river's ability to absorb more changes in fish and wildlife populations before habitat depletion or changes to the river's hydraulics are noticed.

8) Rock rubble substrate used as habitat by aquatic species is depleted.
9) Removal of barren gravel bars and dredging below OHWM increases living space for fisheries.

6. **CHANNEL ENLARGEMENTS ARE EXPECTED TO CAUSE THE FOLLOWING IMPACTS**

   a. Shoreline vegetation is lost.
   b. Existing habitat is altered or lost.
   c. River hydraulics are altered.
   d. Rock rubble source is depleted.
   e. Microorganism population is depleted.
   f. Microorganism species structure is changed.
   g. Stream gradient is changed.
   h. Erosion increases due to gradient changes.
   i. Substrate is changed from gravel to silt.
   j. Fish populations are changed from game fish to rough fish.
   k. Bank stability is decreased.
   l. Also, see items listed above under dredging for impacts that may be applicable.

H. **FINAL DISPOSITION**

The permit should specify exactly what is being authorized. Standard permit language states that the project must be carried out according to the plans submitted. All information submitted orally by the applicant must also be incorporated in the applicant's plans and/or accompanying narrative. Department staff should clarify the final plans with the applicant. Plans should then be stamped FINAL, dated, and signed by the Water Management Specialist.

It is essential that clear, detailed file records be maintained. Nonmetallic mining projects usually continue for years and have high financial stakes. A statement regarding how and under what circumstances the applicant's bond will be used or released should be kept in the file. The applicant should also have copies of this statement, the permit and final approved plans.

The file must include a list of conditions and be complete in these details:

1. Erosion control measures to be implemented should be identified in the permit;

2. Blueprints can fade and lose essential detail. Avoid loss of information by re-stating information drawn on plans;

3. State the time frame for the permit (the initial permit can be issued for a period not greater than 10 years) and any progressive reclamation activities. You may wish to encourage shorter project durations by stating "the nonmetallic mining operation shall remain open for a minimum period of time";

4. The applicant should be required to report annually on the status of the excavation and restoration. Having a plan view and cross section diagram of work completed submitted before the end of the calendar year is a relatively simple way to accomplish this. It will aid you in conducting your mandatory annual inspection and it will keep the applicant involved in the permit process;

5. The bond amount, form, and conditions should be clarified in the permit;

6. The applicant must understand the authority of the Department to intervene in the event of an emergency (such as a flood that threatens the integrity of a berm). A standard condition in the permit stating that the Department retains continuing jurisdiction over the project and that the applicant must perform the action under the direction of the Department assures that this authority is clear;
7. Floodplain excavation where fish entrapment would occur shall be of sufficient permanency, size, depth and quality to sustain fish and aquatic life and shall be open to the public for fishing after reclamation has been completed;

8. A marked, convenient public access from the waterway is required for ponds constructed in the floodplain because of fish entrapment. Documentation of a legal recordable dedicated access must be submitted with the application;

9. At the end of each permit there must be a notice of appeal rights and procedures for any person seeking administrative or judicial review of the Departments decision.

If investigation of an application shows that the proposal will not meet the required standards, the Department may deny the application without public notice [see NR 340.06(4)]. The applicant may request a public hearing pursuant to s. 227.42 or judicial review under s. 227.52.

I. MONITORING

NR 340.10 requires that the project be inspected at least once each year to determine conformance with the permit and progressive reclamation plan. It is strongly recommended that at least two inspections be conducted, once during the growing season and once in the fall. If corrective actions are needed in the spring, there is still time for revegetation to be successful.

The annual site inspection form found in the appendix can be used to document your inspection.

J. ENFORCEMENT

Operators should be made aware that enforcement actions could result in serious consequences. Under NR 340.06, they are ineligible for permit renewals if a proceeding for revocation or violation of the permit has been initiated during the term of the permit.

Given the magnitude and economic scope of these projects, the Department should work with the applicants to ensure that they are in compliance. For example, if an operator inadvertently slightly exceeds the boundaries of his operation plan, we can advise them to seek a permit modification under NR 340.08. Notwithstanding the above statement, if we are working with a bad actor who refuses to cooperate even though they know the potential consequences of their action, we should vigorously pursue enforcement.

NR 340.07 gives the Department considerable power and leverage to ensure that an operator fully complies with the permit and operation plan. Where warranted, operations may be halted until corrective actions have been completed. If necessary, the Department may:

1. halt the operation;
2. rescind the permit; or
3. call the bond or cash in the bond alternative.

These actions may be much more costly to an operator than any forfeiture obtained under s. 30.298. Calling in a bond can impact the operator's long-term line of credit. NR 340.06(4) requires the Department to deny any future permit applications if the applicant has previously failed and continues to fail to comply with the statutes or permits issued under these sections.

An operator found either conducting project operations without the required permits or violating the conditions of a permit may be ordered to cease all operations immediately and submit a reclamation plan for the land already affected. Continued operation and after-the-fact permit approval is prohibited until the reclamation plan has been approved by the Department and necessary progressive reclamation has been
completed.

A person violating the nonmetallic mining permit is subject to a forfeiture of not less than $100 nor more than $10,000 under s. 30.298(1). Abatement, pursuant to s. 30.298(5), should be requested when appropriate. Also, under s. 23.79(3), the court may order the defendant to abate a nuisance, restore a natural resource, or take other appropriate action designed to eliminate or minimize any environmental damage caused by the defendant.

Enforcement actions should be initiated with the local conservation warden through the appropriate circuit court in accordance to M.C. 4112.1. Only when insufficient disposition of the case has been adjudged (refusal of district attorney to prosecute, dismissal or no abatement ordered when appropriate), should action be pursued in accordance with s. 30.03 procedures.

K. EDUCATION

Educating operators about NR 340 requirements and related statutes will save both time, money and frustration for all concerned. The applicant's clear understanding of requirements can reduce or eliminate the need for plan amendments.

A letter introducing yourself and the law to all the known operators in an area is a very effective educational tool. Include a copy of NR 340 and the Operator's Guide to Nonmetallic Mining. Make it an information package, not a threat ordering compliance. Provide consultants who work on Ch. 30 and NR 340 projects with a similar package. Be sure to indicate to both groups that you are available to meet to discuss these requirements.

Your steps to educate prospective applicants about nonmetallic mining laws may weigh in your favor should there ever be legal action involving the Department and the operator. A mailing list of prospective applicants can be generated with the help of local telephone books. DILHR has a list of all operators that work in the state.

You may want to share the same letter and materials with the local district attorney or judge if prosecution becomes necessary. You may also want to invite him/her into the field for an on-site inspection.

A news article can be used to inform the public of any water law. Work with the district Public Information Officer to write and disseminate such a news article.
ATTACHMENTS

1. Operator's Guide to Nonmetallic Mining
2. Bond Form
3. Bond Approval Letter
4. Declaration of Restrictive Covenant (for public access to ponds)
5. Annual Site Inspection Form
6. Application Supplement: General Project Information
7. Application Supplement: Reclamation Costs Estimate
8. Related Publications

Attachments 2-8 may be appended to the Operator's Guide to Nonmetallic Mining for distribution to nonmetallic mining operators.
OPERATOR'S GUIDE
TO
NONMETALLIC MINING

This manual was prepared for use by sand, gravel, and rock excavators and private consultants applying for permits under Chapter 30--Wisconsin Statutes and NR 340--Wisconsin Administrative Code.

It provides answers to general questions relevant to the initial application process.

Prepared by the Bureau of Water Regulation & Zoning
Wisconsin Department of Natural Resources
1992
NOTE: Review and processing of completed Chapter 30 applications for nonmetallic mining permits takes time. DNR staff reviews application forms and supplements, conducts field investigations, and completes environmental assessments. This process may take six months or longer. Incomplete applications slow the process considerably.

Please provide all information outlined in this manual. Do not indicate N/A when answering any question unless that option is offered. All requested information is needed for a complete application package.

The best time of year to submit a completed application and drawings with all the required information is around September 1. This allows the DNR to conduct a field inspection and review the project site before freeze-up or snowfall. Paperwork and writing of the required environmental assessment can then be completed during the winter months so a decision can be made before the following spring.
SECTION I
Questions and Answers About Application Permits

1. I want to: Excavate nonmetallic minerals (sand, gravel, clay, peat, rock, asbestos, beryl, feldspar, talc, topsoil etc.) from a site. In general, what regulations may cover my proposed excavation?

ANSWER: Chapter 30 of the Wisconsin Statutes, NR 340, Wisconsin Administrative Codes, and county permits may be required for excavations in upland areas. Permits are required in all shoreland, floodplain, and wetland zones. Contact your area DNR Water Management Specialist and county or city zoning office. Zoning staff administer floodplain, shoreland, and wetland regulations.

2. I want to: Excavate material and create a pond. In general, what regulations may cover my proposed excavation?

ANSWER: A permit under Chapter 30 is required for ponds within 500 feet of navigable water, or if a pond ultimately connects to navigable water, or is connected via a channel to navigable water or is located on any definable stream channel (See Figures 1 and 2).

Note: Contact your local zoning administrator to see if a county zoning permit is required.

3. I want to: Excavate material from a floodplain or high bank adjacent to a stream or lake. In general, what regulations may cover my proposed excavation?

ANSWER: A permit under Chapter 30 is required for excavations disturbing an area in excess of 10,000 square feet on the bank.

Note: Contact your local zoning administrator to see if a county zoning permit is required.

4. I want to: Dredge material from a creek, stream, river, slough or lake bed. In general, what regulations may cover my proposed excavation?

ANSWER: A permit under Chapter 30 is required for excavation of material from any stream, creek, or river regardless if the stream or creek is navigable or nonnavigable. A Chapter 30 permit is also required for excavation of material from a navigable slough. A contract is required for excavation of material from a lake bed.
5. **I want to:** Excavate material while enlarging a creek, stream, river, slough or lake. In general, what regulations may cover my proposed excavation?

**ANSWER:** A permit under Chapter 30 is required for enlargement of any navigable waterways.

**Note:** Contact your local zoning administrator to see if a local county zoning permit is required.

6. **I want to:** Grade and excavate material (sand/gravel bar) from a creek, stream or river channel. In general, what regulations may cover my proposed excavation?

**ANSWER:** A dredging permit is required for removal of material from any water body.

**Note:** If the excavation (sand/gravel bar) is above the Ordinary High-water Mark and does not disturb an area in excess of 10,000 square feet, no permit under Chapter 30 is required.

**Note:** Contact your local zoning administrator to see if a local county zoning permit is required.

7. **I want to:** Excavate material and relocate a stream, creek or river channel. In general, what regulations may cover my proposed excavation?

**ANSWER:** A permit is required for relocating a navigable stream, creek, or river.

**Note:** Contact your local zoning administrator to see if a local county zoning permit is required.
[2 pages of figures appear here]
SECTION II
Chapter 30 and NR 340 Application Requirements

The following information applies to nonmetallic mining and reclamation associated with navigable waterways or adjacent areas that require either a permit or contract under Sections 30.19, 30.195, or 30.20, Wisconsin Statutes.

A permit may only be granted if an activity will not injure or be detrimental to public rights or interest in the waterway involved. Without adequate controls, excavation, dredging or grading in or near navigable waterways can cause serious degradation of water quality, fish and wildlife habitat, and public interest in recreation and scenic beauty.

It is the purpose of NR 340 to avoid unnecessary adverse effects and minimize the unavoidable adverse effects caused during and after such activities, to provide for the expeditious rehabilitation of affected land, and to restrict excavation, dredging and grading where the adverse effects cannot be minimized or avoided.

Natural Resources Board policy recognizes:

1. Streams are sensitive to the large-scale removal of native material from the streambed and immediate banks.

2. The potential consequences of this removal can be significant where the equilibrium of the stream is altered. Compensating aggradation or degradation of the channel can occur downstream from the project location, or where the stability of the streambank is reduced and erosion, slope failure and siltation result.

3. Aquatic resources can be significantly harmed by erosion, deposition, aggradation or degradation. The Board also recognizes the difficulty in predicting when or where such effects will occur and, especially, the difficulty of minimizing those effects once they have been detected.

Natural Resources Board policy requires:

"... nonmetallic mineral excavation in the channel and immediate banks of streams be carefully regulated in order to avoid or minimize adverse effects on aquatic resources. Therefore, the Department shall, in its review of permit applications under this chapter, presume that excavation in the channel and immediate banks should be avoided where reasonable alternatives are available. The Department shall require applicants to convincingly demonstrate a need for excavation of the channel or immediate banks by demonstrating after investigation that reasonable alternatives are not available. The Department will only concur in such excavation when the applicant has demonstrated by a preponderance of evidence that the excavation is technically, economically and environmentally feasible and meets other applicable requirements of law ... no operation may be authorized in navigable waterways designated in s. NR 102.10 as outstanding resource waters which will result in a lowering of water quality or impair any use of the navigable waterway in any way."
Chapter 30 Permit Applications

Operators must use Application Form 3500-53 and the Nonmetallic Mining Permit Application Supplement. These forms are available from any DNR office.

The application package must also include all of the following.

1. Information about the existing natural (vegetative cover) and physical conditions of the site including 1.) a detailed narrative; 2.) wetland and floodplain maps with project boundaries clearly identified; and 3.) drawings and cross sections of the project site.

Information shown on drawings must be referenced to clearly identified, recoverable bench marks, described and located on the plans. Drawings and maps which are color coded reproduce poorly and are not acceptable. Use symbols and a black ink pen or black felt tip pen that does not bleed through the paper. If drawings or maps are larger than 8½" by 11", six sets must be submitted.

The following points must be addressed:

a. Soil and geologic composition of the project site (borings should be required during the early preplanning stages to identify the type of material and size of the deposit);

b. Locations, dimensions and elevations of surface waters;

c. The elevation of ground water throughout the project site;

d. Cross sections of the entire floodplain of any streams. A hydrologic and hydraulic analysis may also be required to demonstrate compliance with NR 116. Net changes in ground contours in the floodway of a stream that may cause an increase in the 100 year flood elevation, including temporary stockpiling, require that the operator submit a hydraulic analysis if the operation exceeds five acres or has an estimated cost exceeding $125,000. Such changes may also require other action such as amending a flood profile or securing flooding easements to comply with ch. NR 116 or a local floodplain zoning ordinance;

e. Location and description of manmade features on the site;

f. Detailed plans and narrative descriptions of the nature and extent (dimensions) of any existing excavations, and the dimensions and quantities of stockpiled materials, topsoil and refuse on the site. The location of both temporary and permanent haulageways (roads) should be shown; including their length, width, side slopes, and elevations;

g. Historical and archaeological features, if known;

h. Existing drainage patterns; and

i. Existing topography. Plans of the site should have a contour interval of 2 feet or less if ground elevations will change and 5 feet or less if ground elevations will not change. A wider contour interval may be approved in areas of steep topography;
2. A legal description of all land within the project boundary that the applicant owns, leases or has an option to purchase or lease. Copies of deeds, options to purchase, and lease agreements must be submitted with the application.

3. Evidence that the applicant has applied for or obtained all necessary local, state, and federal permits and licenses.

4. A statement explaining what the excavated material will be used for (e.g. road construction, asphalt, ready mix, cement blocks, cement pipe, etc.).

5. A description of any investigation conducted to identify alternative upland sites, efforts made to obtain the material, and the estimated volume and quantity of material to be extracted, accompanied by adequate documentation for the basis of the estimates.

6. For connected enlargements and grading projects, applications must include the name and address of the secretary of any property owners’ association pertaining to the bodies of water affected or, if there is no such association, at least 5 persons who own real property located adjacent to the bodies of water. If fewer than 5 persons own real property adjacent to the bodies of water, the names and addresses of such persons that own real estate so located shall be given.

7. The complete Operation and Reclamation Plan described below.

8. Other information as required by the Department of Natural Resources in order to make a decision.

**Operation and Reclamation Plan**

As part of the application package, the operator must provide a detailed schedule and plan describing areas of excavation to be completed each year and work to be performed for each sequential stage of staged operations over the life of the permit.

Include narrative and drawings to clearly describe all of the following.

1. The location, extent (dimensions), depth and manner of operation anticipated. If your project is a staged operation, describe for each stage.

2. The proposed means of loading and transporting material.

3. The estimated volume in cubic yards of material to be extracted and/or stockpiled. Document the basis for the estimates.

4. The final configuration of the nonmetallic mining site including the depths of the excavation; and the location, extent (size) and types of stockpiled materials.

5. Plans to dispose of refuse created on the site throughout the life of the project.

6. The location, removal (time frame), stockpiling (cubic yards) and protection (erosion control) of all
materials in conformance with the local floodplain zoning ordinance and NR 116.

7. Measures to screen the operation from view considering the general shoreland zoning requirements of NR 115.05(3)(c) and the need for buffer zones of sufficient width to prevent environmental pollution.

8. Grading, and stabilization of the site.

9. Measures for diversion and drainage of both ground and surface water from the site where necessary to protect these waters from pollution (include details about erosion control measures such as sediment basins, wash water ponds, sediment screens, silt fences, straw or rock check dams, grass waterways, etc.).

10. Stabilization of the project site, including plans for topsoil grading and application. Include measures to be employed for erosion, drainage control and revegetation. Plans must outline both temporary and final stabilization measures. A diverse, self-regenerative species mixture should be used where consistent with final reclamation. A list of the species for both seed mixtures and woody vegetation to be planted should be provided. Sources of information on stabilization, erosion control and seed mixtures include:

a. The Department of Natural Resource publication entitled *Wisconsin Construction Site Best Management Practice Handbook*, with listings for slope and soil type;

b. The WI Department of Transportation *Standard Specifications for Road and Bridge Construction*, with minimum seeding requirements for disturbed earth and right-of-ways;

c. Soil Conservation Service *Critical Area Planting Guidelines*, with listings for slope and soil types.

The operator may submit alternate seeding mixtures and stabilization techniques designed to achieve stabilization of the site if it can be shown that the methods of the agencies listed above are not appropriate for all conditions encountered.

Revegetation is not necessarily limited to planting of a grass cover; the Department may require woody vegetation (trees and shrubs) in the reclamation plan to offset habitat losses.

11. Floodplain excavation where fish entrapment would occur should include a design for an impoundment of water (ponds) of sufficient quality, permanency, size, and stable slopes or banks to benefit public use and avoid fish kills.

12. A marked, easily usable public access from the waterway is required for ponds constructed in the floodplain because of fish entrapment. Documentation of a legal, recordable, dedicated access must be submitted with the application.

13. An acknowledgement of continued responsibility for restoration and revegetation of the project site until stabilization has been determined to be adequate by the Department. (This acknowledgement is found within the *Nonmetallic Mining Permit Application Supplement*).
14. Estimated cost for progressive, temporary, and final reclamation of the entire nonmetallic mining site.

15. An estimate of total reclamation costs. Use the Reclamation Costs Estimate form which is part of the Nonmetallic Mining Permit Application Supplement or provide complete information on a separate sheet. This information is needed for an environmental analysis and to determine whether the operator must submit a hydraulic analysis as specified in NR 116. These costs will be only a portion of the total project costs.

16. Other information as needed by the Department in order to make a decision.

NOTE: Unless reflected in the schedule, cessation of project operations for more than 180 consecutive days is an abandonment of operations [see NR 340.02(1)].

Bonding

Bonding is required for each site over one acre and multiple sites of less than one acre by the same operator. Governmental units are not required to obtain bonds.

1. Determination and Notification - The bonding level for reclamation or progressive reclamation in staged operations must be the larger amount of either $2,000 per acre or $0.25 per cubic yard of material excavated based on 1989 dollars unless the operator justifies a lesser amount to the Department's satisfaction.

The base of 1989 dollars requires that the bonding level must be adjusted to reflect inflation or the cost of living increases. For 1992, the inflation of 4.6 % for 1989, 6.1% for 1990 and 3.1% for 1991, or a total of 14% (1.046 x 1.061 x 1.031 = 1.144) must be added to the listed rates resulting in amounts of $ 2280 per acre or $ 0.285 per cubic yard. For permits issued after 1992, remember to correct for cost of living adjustments for all years back to 1989.

The Department of Natural Resources must determine the required bonding level for all operations and notify the operator. Following approval of the permit, and as a condition of the permit, the operator must file a bond with the Department. The bond amount shall be sufficient to cover the cost to the State of hiring a contractor to complete reclamation or progressive reclamation in staged operations.

2. Filing - Upon notification of required bonding levels by the Department, but prior to commencing the project, the operator shall file with the Department a bond conditioned on faithful performance of all requirements of Ch. 30, all provisions of NR 340 and all provisions of the permit. The operator may start operation and reclamation activities only after notification by Department staff that the bond submitted meets NR 340 requirements.

3. Requirements - Bonds must be issued by a surety company licensed to do business in this state. At the option of the operator, a performance bond or a forfeiture bond may be filed. Surety companies may complete the reclamation plan in lieu of cash payment to the Department.

The bond must provide that it is not cancelable by the surety, except after not less than 90 days notice to the Department in writing by registered or certified mail. The bond must be payable to the
Bonds should be issued on a non-cancelable form. A bond may not be cancelled until a replacement bond has been approved or the project has been closed out after a final inspection. Bonds must be kept current.

4. **Bond Alternatives** - Upon written approval of the Department, an operator may deposit cash, certificates of deposit or government securities with the Department in lieu of a bond. Interest received on certificates of deposit or government securities will be paid to the operator. Certificates of deposit must be automatically renewable or other assurances shall be provided before the maturity date. Any securities must be made payable to the "State of Wisconsin, Department of Natural Resources."

5. **Bond Reevaluation** - The Department may reevaluate and adjust the amount of the progressive reclamation bond or security deposit required for reclamation. Reclaimed areas may be released from the bond coverage. Reevaluation will be made pursuant to NR 340.055(1) and (2).

6. **Multiple Project Permit Bonding** - Any operator who obtains a permit from the Department for two or more sites may elect, at the time a second site is approved, to post a single bond in lieu of separate bonds on each site. Any single bond so posted must be in an amount equal to the estimated cost to the State for reclamation as stated in each permit. When an operator elects to post a single bond in lieu of separate bonds previously posted on individual sites, a separate bond may not be released until the new bond has been accepted by the department.

7. **Bond Release** - The Department will release the operator's bond after inspection of the project site shows completed reclamation of the project site in accordance with the operation and reclamation plans. The entire project site must be adequately revegetated and stable before the bond can be released. Final inspection must be made not less than one year, nor more than two years after the completion of the project, including reclamation.

8. **Abandoned Sites** - Bonds for any site abandoned at the time a permit expires will not be released unless it is shown that no operations have occurred at that site and no potential for environmental pollution exists as a result of an operator's actions or inactions.
Permit Modifications

1. At any time prior to expiration of a permit, an operator may apply for an amendment or cancellation of a project permit or for a change in the reclamation plan for a site.

   The application for the amendment, cancellation or change should be submitted by the operator on a form provided by the Department. The application should identify any tract of land to be added to or removed from the permitted site, or to be affected by a change in the operation and reclamation plan. Any increase in the size of the site shall be subject to the notice and potential hearing requirement of s. 30.02.

2. When one operator succeeds to the interests of another in any uncompleted operation, the Department will release the first operator from the responsibilities imposed by chapter 30 only if:

   a) both operators are in compliance with the requirements and standards of the chapter and NR 340;

   b) the new operator assumes the responsibility of the former operator to complete the reclamation; and

   c) the new operator submits an adequate bond.

Permit Renewals and Extensions

The initial Chapter 30 permit can be issued for a period not greater than 10 years. If no proceeding for revocation or violation of the permit has been initiated during the term of the permit and there are no other changes or previously unknown circumstances, including environmental consideration, the permit may be either renewed or extended if the following considerations are met:

1. A request for a permit renewal or extension must be submitted to the Department in writing prior to the expiration date of the existing permit. Be sure to specify whether you are requesting a 3-year extension or 10-year renewal.

2. No permit renewal or extension may be granted unless the operation is in compliance with the terms of the existing permit.

3. Permit extensions may be granted for up to three years. A permit extension may only be granted one time and only toward the end of a project when permit renewals are no longer needed.

4. Permits may, after a notice and opportunity for hearing, be renewed for succeeding periods of up to 10 years.

5. Permit renewals and extensions may be conditioned upon correction of any unanticipated environmental damage occurring during the original permit.

Inspections and Documentation
Department of Natural Resources staff is required to inspect each nonmetallic mining site at least once annually to ensure that the operation is in conformance with the permit and the operation and reclamation plan. DNR staff writes reports based on these site inspections.

Operators may be required to submit an annual narrative describing the progress of the operation and reclamation.

**Violations**

An operator found either conducting project operations without the required permits or violating the conditions of a permit will be ordered to cease all operations immediately and submit a reclamation plan for the land already affected. Continued operation and after-the-fact permit approval is prohibited until the reclamation plan has been approved by the Department and necessary progressive reclamation has been completed. Bonds may be called to secure necessary reclamation.

The Department may cancel and rescind the permit of any operator who is in violation of NR 340 and the permit.
SECTION III
Sample Drawings and Illustrations

The following series of figures, taken from the publication, *A Guide to Site Development and Rehabilitation of Pits and Quarries*, Industrial Mineral Report 33, 1970, Ontario Department of Mines, may be valuable to operators developing Chapter 30 and NR 340 applications. Note that the illustrations do not contain all information required for an application.

Illustrations of temporary and final erosion control techniques can be found in the Wisconsin Department of Natural Resources handbook, *Wisconsin Construction Site Best Management Practice Handbook*.

Copies of the handbook may be purchased through:

Document Sales
202 S. Thornton Avenue
P.O. Box 7840
Madison, WI 53707

Orders must be prepaid by cash, money order or check, payable to Department of Administration. Call to determine cost: 608/266-3358. Telephone orders cannot be accepted.
[15 pages of figures here]
SECTION IV
Glossary and Contacts List

Glossary

Abandonment of operations means the cessation of nonmetallic mining operations for more than 180 consecutive days where the cessation is not specifically set forth in an operator's application and permit, or by other written request. Abandonment of operations does not include the cessation of activities due to labor strikes or natural disasters.

Bank means the land surface abutting the bed of any navigable waterway which, either prior to any project or alteration of land contours or as a result of the proposed project or alteration, slopes or drains without complete interruption into the water body [as defined in NR 340.02 (2)].

Buffer zone means an undisturbed strip of land which may require additional planting of trees or shrubs to screen the operations from view or act as a sediment trap along waterways, property lines, and roads or highways.

Navigable streams have a bed and banks and can float a canoe or other small craft at some time of the year-even if only during spring floods. Refer to DNR Publication 5-3500(82) "Public or Private? I - Navigability".

Nonmetallic mining refuse or "refuse" means all waste soil, rock, mineral, liquid, vegetation and other material resulting from an operation. Refuse does not include merchantable by-products directly resulting from or displaced by the operation.

A nonmetallic mining site is the area disturbed by an operation, including the surface area from which material has been or will be removed, the surface area covered by or to be covered by refuse and mineral stockpiles, and land disturbed or to be disturbed by the construction or improvement of haulageways.

The Ordinary High-water Mark (OHWM) is the point on the bank or shore where the water is present often enough to leave a distinct wear mark. More specifically, the OHWM is the point on the bank or shore up to which the water, by its presence and action or flow, leaves a distinct mark indicated by erosion, destruction of or change in vegetation or other easily recognizable characteristics. Refer to DNR Publication 6-3500(82) "Public or Private? II - The Ordinary High-water Mark". If you have further questions, please contact the DNR Water Management Specialist serving your area.

Reasonable alternatives means the use of a substitute upland site having similar material or, where substitute sites are unavailable, modifying the operation plan or reclamation plan to minimize impacts to or stabilize the streambed and banks where the objectives of the operator can still be substantially met.

Reclamation means the rehabilitation of the nonmetallic mining site including, but not limited to, establishment of adequate vegetative cover, stabilization of soil conditions, prevention of environmental pollution and restoration of fish, plant and wildlife habitat.

Shorelands are areas zoned within 1000 feet of a lake's Ordinary High-water Mark, and within 300 feet of all navigable streams or the outer edge of the floodplain, whichever distance is greater.
### Zoning and DNR Offices By County

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<th>DNR OFFICE</th>
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<td>Brown</td>
<td>414-436-3266</td>
<td>414-448-5142</td>
<td>Milwaukee</td>
<td>Call city halls</td>
<td>414-263-8679</td>
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<td>715-388-9214</td>
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<td>Chippewa</td>
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<td>715-839-3769</td>
<td>Outagamie</td>
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<td>Columbia</td>
<td>608-742-2191</td>
<td>414-485-3009</td>
<td>Pepin</td>
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<td>Crawford</td>
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<td>Pierce</td>
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<td>Dane</td>
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<td>715-822-3590</td>
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<td>Door</td>
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<td>Florence</td>
<td>715-528-4251</td>
<td>715-732-0101</td>
<td>Rusk</td>
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<td>715-762-3204</td>
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<td>608-935-3368</td>
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<tr>
<td>Grant</td>
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<td>608-935-3368</td>
<td>Sawyer</td>
<td>715-634-8288</td>
<td>715-762-3204</td>
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<td>Green</td>
<td>608-328-9423</td>
<td>608-273-5970</td>
<td>Shawano</td>
<td>715-526-6766</td>
<td>715-732-0101</td>
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<tr>
<td>Iowa</td>
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<td>608-935-3368</td>
<td>Taylor</td>
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<td>Kenosha</td>
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<td>La Crosse</td>
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<td>608-785-9010</td>
<td>Waukesha</td>
<td>414-548-7790</td>
<td>414-263-8680</td>
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<tr>
<td>Lafayette</td>
<td>608-776-4820</td>
<td>608-935-3368</td>
<td>Waupaca</td>
<td>715-258-6255</td>
<td>414-424-4003</td>
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<td>Langlade</td>
<td>715-627-6206</td>
<td>715-627-4317</td>
<td>Waushara</td>
<td>414-787-4631</td>
<td>414-424-4003</td>
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<tr>
<td>Lincoln</td>
<td>715-536-0333</td>
<td>715-627-4317</td>
<td>Winnebago</td>
<td>414-236-4844</td>
<td>414-424-4003</td>
</tr>
</tbody>
</table>
- In cities and villages, contact the municipal zoning administrator, building inspector, or clerk and the DNR office for the county in which the municipality is located.
STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
ATTN: AREA WATER MANAGEMENT SPEC.
X Name, address
X, WISCONSIN, X

KNOW ALL MEN BY THESE PRESENTS:

That ________________________________________________, ________________________________________________,
(Name)                          (Address)
of ________________________________________________, ________________________________________________, as Principal,
(City)                  (State & Zip Code)
and ________________________________________________, ________________________________________________,
(Name of Surety Company)                     (Address)
a surety company organized and existing under the laws of the State of ____________________________________________
and duly organized to do surety business in the State of Wisconsin, as Surety, are held and firmly bound
unto the State of Wisconsin, Department of Natural Resources, as obligee, in the penal sum of X dollars
($X), lawful money of the United States, for payment of which the Principal and Surety bind themselves,
their heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That whereas, the said Principal has been
authorized to mine nonmetallic minerals under permit X from a project site adjacent to the X Waterway,
located in Section X, Township X North, Range X East, X Village/ City/ Town of X, X County,
Wisconsin, and the project is subject to the requirements of Chapter 30, Wisconsin Statutes, and NR 340,
Wisconsin Administrative Code.

WHEREAS, Chapter NR 340 requires that the Principal provide the Obligee with a bond to ensure that
permit X or any amendments thereto will be completed as approved.

WHEREAS, this performance bond is written to provide proof of financial responsibility to complete
permit X or any amendments pursuant to Chapter NR 340 and shall inure to the benefit of the Obligee.

Now, Therefore, the condition of this obligation is such that if the Principal or any successor in interest
complies with the requirements of permit X and any amendments thereto and completes the project in
accordance with these requirements then, and only then, this obligation shall be void; otherwise, it shall
remain in full force and effect.

All or any part of this bond may be withdrawn by the Obligee, upon written request by the Secretary of the
Obligee, to be used to carry out the requirements of permit X and any amendments thereto if the Principal
or any successor in interest fails to do so.
STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES  
PERFORMANCE BOND FOR NONMETALLIC  
EXCAVATION PERMIT X  
ATTN: AREA WATER MANAGEMENT SPEC.  
X Name address  
X, WISCONSIN, X

The liability of the Surety shall not be discharged by any payment or succession hereunder, unless and until such payment or payments shall amount in the aggregate to the full penal sum of this bond, but in no event shall the obligation of the Surety thereunder exceed the full penal sum of this bond.

Release or discharge of the Surety shall not release the Principal or any successor in interest from the obligation to fully and completely comply with all requirements of permit X and any amendments thereto. The insolvency or bankruptcy of the Principal shall not constitute a defense to the Surety with regard to any claim of liability on the obligation of this bond. No amendment to permit X will release the Surety from its obligation under this bond.

The Surety hereby waives notification of any failure on the part of the Principal or any successor in interest to faithfully comply with the terms of permit X or any amendments thereof and lack of notice from the Obligee will not bar or limit recovery against the Surety.

This bond is effective on the __________ day of ____________________, 20____, and shall continue in force for 2 (two) years after completion of permit X or any amendments. As long as any obligation of the owner or any successor in interest for compliance with permit X or any amendments thereto exists, this bond shall not be cancelled by the Surety unless a replacement bond or other proof of financial responsibility acceptable to the Obligee is provided to the Obligee.

If the Surety proposes to cancel this bond, notice shall be provided to the Obligee and the Principal in writing by registered or certified mail not less than 90 days prior to the proposed cancellation date.

Not less than 30 days prior to the expiration of the 90-day notice period, the principal shall deliver to the Obligee a replacement bond or other proof of financial responsibility under permit X, any amendments and Chapter NR 340, Wis. Administrative Code.

In the absence of the delivery of a replacement bond or other acceptable proof of financial responsibility, all site or facility operations shall immediately cease and this bond shall remain in full force and effect as long as any obligation of the Principal or any successor in interest for compliance with permit X or any amendments thereto.
STATE OF WISCONSIN

PERFORMANCE BOND FOR NONMETALLIC

DEPARTMENT OF NATURAL RESOURCES

EXCAVATION PERMIT X

ATTN: AREA WATER MANAGEMENT SPEC.

X Name, address
X, WISCONSIN, X

Signed, sealed and dated this the _____ day of __________________, 20___.

___________________________________
PRINCIPAL

___________________________________
SURETY

___________________________________
ATTORNEY-IN-FACT

BOND NUMBER_________________________
Dear Mr. X:

Your $ X.00 performance bond No. X for permit X to excavate X and while creating a pond within 500 feet of X, or grade in excess of 10,000 square feet on the bank of X, Town of X in X County is approved. You may (start or resume) excavation under this permit.

Should you have any questions, please call me at X.

Sincerely,
X District

X Area Water Management Specialist

cc: X
X Area Office
X, Conservation Warden,
X, County Zoning Administrator
DECLARATION OF RESTRICTIVE COVENANT

The undersigned, __________________________ and _____________________(spouse) (Owners), hereby declare:

1. They are the record owners of the following described lands, to-wit:

   The __________________ Quarter of the _______________ Quarter (___¼ ___¼)
   of Section _______________ (____), Township ______________ (____)
   North, Range ______________ (____) East.

2. Said lands are subject to excavation and removal of gravel and other material therefrom; following such
   excavation, _________________ will construct certain proposed ponds on said premises;

3. Said resultant ponds will be in the vicinity of the _______________ River which flows across the said
   _______________ Quarter of the _______________ Quarter (___¼ ___¼) of Section _______________
   (____), Township ______________ (____) North, Range ______________ (____) East;

4. _________________ has applied to the Department of Natural Resources
   for necessary permits for excavation and pond construction in said areas and a condition thereof is the
   granting of public fishing access, on foot, from the said _________________ River to the said
   proposed ponds, upon completion thereof;

5. The said excavation and pond construction will be to the benefit of the undersigned owners;

6. In consideration of the aforesaid benefits by issuance and obtaining of the said permits, the undersigned
   owners do hereby declare the following as a restrictive covenant on the lands described, to run with the
   lands, to-wit:
An easement is granted to the public, for pedestrian access only for fishing, extending from the _____________________ River as it flows through the _____________________ Quarter of the ___________________ Quarter (____¼ ____¼), Section ______________ (___), Township ______________ (_____) North, Range ______________ (_____), Section ______________ (_____), T____N, R____E to those ponds hereafter constructed upon those lands by _____________________, said access easement to become effective upon completion of such pond construction.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _______ day of _______________________,  __________.

(month)   (year)

__________________________________      _______________________________
(Name)   (Name)

State of Wisconsin

) ss.
County of ________)

Personally come before me this ___________ day of August, A.D., 19____, the above-named ____________________________, and ____________________________ to me known to be the persons who executed the foregoing instrument and acknowledged the same.

_______________________________________________
Notary Public, ________________ County, Wis.

My commission expires: ___________________
NONMETALLIC MINING SITE INSPECTION RECORD

Permit _______________________ General file: ______________________
Permittee: ___________________________________ Present: Yes_____ No______
Location: _____ 1/4 of the _____ 1/4, Section _____, T_____N, R_____E,
Waterway:______________________ County: __________________________________
===========================================================================
Has the excavation of material started?  Yes ___ No ___
If yes, what type of excavation was done?  Pond __, Grading __, Dredging__.
===========================================================================
Was a permit issued for a pond excavation?  Yes ___ No ___ N/A ___.
Has groundwater been exposed? Yes ___ No ___ Comment:__________________
_______________________________________________________________________.
Depth of exposed water is approximately _____________ feet.
Dimensions of the exposed water are _______ feet wide by _______ feet long.
===========================================================================
Was a permit issued for grading on the bank? Yes ___ No ___ N/A ___.
Dimensions of the graded area are _______ feet wide by _______ feet long.
===========================================================================
Was a permit issued for dredging below the OHWM? Yes ___ No ___ N/A ___.
Dimensions of the dredged area are ______ feet wide by _______ feet long.
**Erosion:**

Have temporary erosion control measures been taken? Yes ___ No ___.

What type of temporary erosion control measures have been taken?

Silt fence __, Rock check dams __, Straw-bale check dams __, Sod strips __, Mulching __, Settling basins __, Temporary vegetative cover __, Contour ridges __, Other ____________________________________________________________________________.

Is any portion of the project site eroding? Yes ___ No ___.

Are sediments being contained on the project site? Yes ___ No ___.

Comments: ____________________________________________________________________________________
______________________________________________________________________________________________.

Is the site being dewatered? Yes ___ No ___.

What type of dewatering is occurring? Pumping __, Gravity ___.

Does it appear that sediment-laden water is leaving the site and entering surface waters? Yes ___ No ___.

Was a WPDES permit issued for dewatering? Yes ___ No ___.

===========================================================================

**Permit Conditions:**

Phasing of plan followed: Yes ____ No ____

Side slopes in compliance: Yes ____ No ____

Excavation is within boundaries: Yes ____ No ____

Topsoil is being salvaged: Yes ____ No ____

Comment: _______________________________________________________________________________________

Is salvaged topsoil located in approved area? Yes ____ No ____

If salvaged topsoil is not located in approved area, what is the location?
______________________________________________________________________________________________
Is the site revegetated annually? Yes ___ No ___ Comment:____________________

Has the buffer zone been encroached upon? Yes ___ No ___.

Comments:_________________________________________________________________

The required width for the buffer zone at the point of encroachment: _____ ft.

Are adjacent wetlands being impacted by this project? Yes ___ No ___.

Additional comments:_________________________________________________________________

__________________________________________________________________________

Inspector: _____________________________ Date: __________________     12/01
GENERAL PROJECT INFORMATION

OPERATOR MUST COMPLETE THIS FORM. Please type or print in black ink. Attach comprehensive plans, maps, cross-sections, narrative descriptions, etc. as appropriate. See the Operator's Guide to Nonmetallic Mining for detailed information about the application packet requirements. Drawings and maps which are color-coded reproduce poorly and are not acceptable. If maps or drawings are larger than 8¼" by 11", six copies must be submitted. Otherwise, submit only the original documents, keeping copies for your files.
If your project is a connected enlargement or grading project, enter the name and address of the secretary of any property owners' association pertaining to the affected waterway. If there is no such association, enter the names and addresses of 5 persons who own real property located adjacent to the waterway. If fewer than 5 persons own real property adjacent to the waterway, enter names and addresses of those persons.

1. 
2. 
3. 
4. 
5. 

Briefly describe the existing physical and natural conditions of the site, including types of vegetative cover.

<table>
<thead>
<tr>
<th>Elevation of the bottom of the nonmetallic mineral deposit _______ ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance from the excavation to the nearest public road?</td>
</tr>
<tr>
<td>Distance from the excavation to the nearest residence?</td>
</tr>
<tr>
<td>Distance from excavation to nearest navigable water?</td>
</tr>
<tr>
<td>What is the datum of benchmarks used for elevation reference?</td>
</tr>
<tr>
<td>Is the project site located in the floodplain of a stream? Yes__ No__</td>
</tr>
<tr>
<td>Is the project site located in or adjacent to a wetland? Yes__ No__</td>
</tr>
<tr>
<td>Describe existing topography (i.e., level, steep hill, gentle slope).</td>
</tr>
<tr>
<td>Describe existing land use on project site (i.e., vacant, farming, etc.).</td>
</tr>
<tr>
<td>Describe abutting land use.</td>
</tr>
</tbody>
</table>
Describe and show on plans the soil and geologic composition, including topsoil depth, of the project site. Also describe and show the location of boring or test holes taken to identify the type of material and size of the deposit.

Describe and show on plans the location, dimensions, and elevations of surface waters within or adjacent to the project.

Describe and show on plans the elevation of groundwater throughout the project site.

Describe and show on plans the location of manmade features within the site.

Describe and show on plans the nature and extent (dimensions) of any existing excavations, dimensions and quantities of stockpiled materials, topsoil and refuse in the site.

Describe and show on plans the location of both temporary and permanent haulageways (roads) including the length, width, side slopes, and elevations of the roads.

Describe and show on plans any known historical and archaeological features.

Provide a legal description of all land within the site that the applicant owns, leases or has an option to purchase or lease. Copies of deeds, options to purchase, and leases must be attached.

What will the excavated material be used for (e.g. road construction, asphalt, ready mix, cement blocks, cement pipe)?

Describe any investigation conducted to identify upland alternative nonmetallic mining sites. What efforts were made to obtain the material? What was the estimated volume of material to be extracted? Provide adequate documentation for these estimates.
<table>
<thead>
<tr>
<th><strong>OPERATION PLANS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed depth of excavation (in feet):</td>
</tr>
<tr>
<td>Number of acres to be disturbed, including haulageways, processing areas, storage areas, etc.)</td>
</tr>
<tr>
<td>Anticipated duration of mining (in years):</td>
</tr>
<tr>
<td>Anticipated starting date (month/day/year):</td>
</tr>
<tr>
<td>Normal months of operation:</td>
</tr>
<tr>
<td>Normal hours of excavation:</td>
</tr>
<tr>
<td>Days of the week excavation will usually take place:</td>
</tr>
<tr>
<td>Type of machinery to be used:</td>
</tr>
</tbody>
</table>

Will there be gravel washing or crushing operations on the site? Yes ___ No ___

If yes, describe the operation:

If yes, how many cubic yards of gravel will be stockpiled at any one time?
<p>| Are any buildings to be constructed on site? Yes ______ No ______ |
| If yes, describe: |
| (Indicate building locations on attached drawings and maps.) |</p>
<table>
<thead>
<tr>
<th>RECLAMATION PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>How will you screen the operation from view along waterways, property lines, roads and highways?</td>
</tr>
<tr>
<td>Describe the specific seed mixture, quantities and species you will use.</td>
</tr>
<tr>
<td>Describe fertilizer and mulch to be applied:</td>
</tr>
<tr>
<td>Will any final slopes be steeper than 3 feet horizontal to 1 foot vertical? Yes__ No__</td>
</tr>
<tr>
<td>If yes, explain reasons:</td>
</tr>
<tr>
<td>How large an area will be excavated before reclamation begins? _______ (acres, sq. ft.)</td>
</tr>
<tr>
<td>Total estimated cost for reclamation of project site: $_______.00. (Reclamation Costs Estimate form must be attached.)</td>
</tr>
<tr>
<td>Basis for estimation:</td>
</tr>
</tbody>
</table>
Will an artificial pond be created? Yes ___ No ___

a. If yes, what will the average depth be? _______

b. Maximum depth? _______

c. Size in acres? _______

d. Will the pond be subject to flooding? Yes ____ No ____

e. Will any final slopes in the pond be steeper than 3’ horizontal to 1’ vertical?
   Yes ____ No ____

   If yes, explain reasons:
## OPERATOR INFORMATION

<table>
<thead>
<tr>
<th>Operator's name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator's title:</td>
</tr>
<tr>
<td>Company's name:</td>
</tr>
<tr>
<td>Company address:</td>
</tr>
<tr>
<td>Telephone, with area code (daytime)</td>
</tr>
<tr>
<td>Telephone, with area code (nights)</td>
</tr>
</tbody>
</table>

I acknowledge my continuing responsibility for restoration and revegetation of the project site until stabilization has been determined adequate by the Department of Natural Resources.

Operator's signature:

Date:
<table>
<thead>
<tr>
<th>Activity or Purchase</th>
<th># Acres or N/A</th>
<th>Cost/Acre or N/A</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recontouring</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spoil bank area, side slopes and floor</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Equipment costs (grader, bulldozer, etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recontouring topography of excavated area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topsoil (dry vs. wet gravel pit)</td>
<td></td>
<td></td>
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<tr>
<td><strong>Topsoil and Subsoil</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topsoil stripping</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topsoil replacement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase of additional topsoil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respreading and recontouring subsoil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment cost to spread topsoil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous grading of spoil piles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Preparation and Revegetation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment cost for seedbed preparation (discing, harrowing &amp; related ground work)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seed, fertilizer and lime purchase</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment cost for spreading seed, fertilizer and lime</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Mulch purchase and application</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Costs for purchasing and planting shrub and tree seedlings</td>
<td></td>
<td></td>
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<tr>
<td>Construction of settlement basins, silt fence, filter cloth, rock riprap, etc.</td>
<td></td>
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<tr>
<td>Cost for stabilization of topsoil storage piles (temporary and final)</td>
<td></td>
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<tr>
<td>Cost of reseeding, if first seeding fails</td>
<td></td>
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<td></td>
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<tr>
<td>------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of temporary erosion control measures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Acres Involved in Reclamation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Reclamation Costs</strong></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>


42. "Results of Tree and Shrub Plantings on Low pH Strip-Mine Banks", Walter H. Davidson, Northeastern Forest Experiment Station, Broomall, PA, 1979.


45. "Birch Species Survive Well on Problem Coal Mine Spoils", W.H. Davidson, Proceedings, 24th Northeastern Forest Tree Improvement Conference, University of Maryland, College Park, Maryland, 1976.


56. "Seeding and Planting to Achieve Land Management Objectives", W.T., Plass.


91. "Techniques to Reduce the Sediment Resuspension Caused by Dredging", by Gene L. Raymond,


101. Can Mined Land be Made Better Than Before Mining?", by the Land Reclamation Research Center, the North Dakota Mining and Mineral Resources Research Institute and the North Dakota Mining and Mineral Resources Research Institute and the North Dakota Energy Development Impact Office, 1982.


104. "The Impacts of Sand and Gravel Dredging on Trout and Trout Habitat in the Chattahoochee River, Georgia", Christopher R. Martin, and Timmy B. Hess, Georgia Department of Natural Resources.
Resources, Game and Fish Division, Atlanta, Georgia, 1986.


GUIDANCE PURPOSE AND DISCLAIMER

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance cannot be relied upon and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes, common law and administrative rules to the relevant facts.

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PURPOSE

A permit is required before changing the course of a navigable stream to protect the public against adverse impacts of channel changes. Potential impacts include flooding, habitat loss, fish and wildlife damage, erosion and sedimentation.

MECHANISM

Changing stream courses is regulated by a permit system under Section 30.195, Wisconsin Statutes.

HISTORY

As agricultural use intensified in the southwestern part of the state, farmers straightened many of the region's meandering streams. A straight stream allowed them to farm right up to the edge of the channel.

In the early 1960s, the USDA Soil Conservation Service (SCS) assisted farmers in both planning and costsharing for stream straightenings. As a result, many trout streams were straightened and their fishery value diminished.

This destruction was the primary cause for the passage of the law requiring permits and providing penalties for noncompliance.

After considerable nationwide research which determined the many adverse impacts of stream straightening, the SCS changed its policies to protect the existing streams rather than straightening them. Today, stream straightening proposals are rarely supported by SCS.

Section 30.195 was first passed as Chapter 454, Laws of 1961. Since then, it has been modified four times, most recently in Chapter 392, Laws of 1969. The original intent of the Law was to protect the public interest in navigable water, and this remains the purpose.
STANDARDS

Statutory Standards

Section 30.195, Stats., is only applicable to navigable streams. The following standards are applicable

1. The project must improve the economic or aesthetic value of the owner's land.
2. The project must not adversely effect the flood flow capacity of the stream.
3. The project must not be detrimental to public rights or the rights of riparians located on the stream.

Section 30.195, Stats., does not apply to municipal or county owned lands in counties having a population of 500,000 or more.

Administrative

1. Wetlands. NR 1.95, Wis. Adm. Code, establishes general standards to be applied by the Department decisions affecting wetlands. The Department presumes that wetlands are not t be adversely impacted or destroyed. NR 1.95 further specifies the balancing-test to be used by the Department when determining the potential adverse effects of a project on a wetland versus the benefit to the applicant.

2. Shoreland areas. NR 115, Wis. Adm. Code, establishes administrative standards to be followed by counties in their administration of shoreland zoning ordinances. These standards should be reflected in approving channel changes.

3. Floodplain areas. NR 116, Wis. Adm. Code, establishes administrative standards followed by Local units of government and the state. Permits or orders for channel changes should require applicants to conform with standards established in NR 116.

4. Environmental impacts. NR 150, Wis. Adm. Code, establishes procedures for determining whether a given project requires an Environmental Impact Statement (EIS). channel changes are Type III actions (do not normally require an environmental assessment), unless they are associated with a mineral extraction project. Channel changes associated with a mineral extraction project are Type III actions, requiring an environmental assessment be done.

5. Sand and gravel extraction. NR 340, Wis. Adm. Code, would apply when a sand and gravel extraction project results in a change in the course of a stream. NR 340 contains extensive requirements, including restoration plans and bonding.

PROCESS

Application

The applicant must file a complete set of plans, indicating exactly what is proposed, showing the configuration of the stream before and after the project and describing how the change will be made. Information should be adequate to allow a simple stage-discharge analysis to be performed. Information may include some or all of the following dimensions; material on site; transitions to natural channels and project location. The applicant should provide information about structures (culverts, bridges, dams) in the area of the proposed stream course change and location with respect to the stream course change.

Notice Requirements
A public notice is not required. Traditionally, the Department has required that notice be given to adjacent riparians, and sometimes to other riparians along the stream. If adjacent riparians will be adversely affected by the project, the applicant must obtain their consent before a permit is issued.

**Field Investigation and Review Considerations**

Upon receipt of a completed application, a field investigation will be made by appropriate Department staff. The investigation and technical review will determine whether a proposed stream straightening will meet the applicable standards. A Water Regulation Investigation form (3500-23) should be completed. Other types of information to be collected during the field investigation and items to be considered during the technical review include:

1. **Structures**
   
   The applicant should have provided information about structures (culverts, bridges, dams) in the area of the proposed stream course change.

   If there are any other structures present, such as dikes, levees, retaining walls or training walls, make a sketch of them. Prepare a scaled map and take photographs if necessary. Any obstructions to the flow of water should be noted and sketched.

2. **Stream Characteristics**
   
   Take photographs upstream and downstream at the project site. Examine the bank and bed materials to determine the cohesiveness of the material and the organic content. To estimate these parameters, pick up a sample and squeeze it to determine cohesiveness. Note color and odor to indicate organic content.

   The condition of the bank and any indication of slumping, erosion, or failure should be noted and documented. The angle of repose is one way of determining whether the stream bank is stable. This angle may be estimated by finding a stable bank and measuring the slope of the bank.

3. **Flood Flow Capacity**
   
   An altered watercourse must have a hydraulic capacity at least as great as the section it is replacing. In practice, the capacity is generally evaluated during bank full conditions. Normally, straightening a stream and smoothing the banks results in increased flow capacity. If incorrectly designed, a relocation project may result in reduced flood flow capacities.

4. **Erosion and Stumping**
   
   Most stream straightenings increase flow velocities by shortening the channel length which in turn steepens the gradient. This can result in increased scour in the streambed and possibly increase bank erosion. The significance of increased flow velocities depends upon the bed and bank material. Coarse, rough materials like cobbles and gravel are more resistant to erosion than clay, fine sand and unconsolidated fill which may be very sensitive to increased velocities. If erosion is a problem, the applicant should be required to place riprap or other erosion control devices in appropriate places.

   The review should also evaluate possible downstream effects of the project, including increased erosion of downstream riparian's land or potential erosion and undermining of downstream structures. The banks may become unstable if velocities are increased. The investigator must be satisfied that downstream bank slopes will be stable before approving the project. Again, riprap should be required where necessary.

5. **Downstream Flooding**
Higher average velocities may aggravate downstream flooding since the time of concentration of the basin decreases. This is generally not a problem in the case of small projects, but major projects could increase flooding. If the project will aggravate downstream flooding, downstream riparians must give their consent before a permit can be issued.

6. **Biological-Chemical**

Channelization may be detrimental to fish and wildlife due to increased erosion and sedimentation, changes in the surrounding water table, streambed disturbance or changes in the stream's flow characteristics.

The field investigation by Department staff must include a determination and evaluation of the fishery and wildlife in the project area.

Together, water management specialists and fish and wildlife managers must consider how the project will affect the habitat of the fishery and wildlife in the area. They should document any objections to the project and suggest possible ways to minimize the project impacts. If the project will significantly damage habitat and the damage cannot be minimized, they should object to the issuance of the permit.

Some possible effects of channelization that should be considered in any evaluation include:

A. **Habitat loss:**

Channelization can result in a straight uniform channel. Pools, riffles, undercut banks and other preferred habitat are eliminated. Total water edge habitat will be reduced significantly.

B. **Temperature change:**

Excavation of a new channel is preceded by clearing and grubbing. The loss of streamside vegetation may increase the daily fluctuation of water temperatures. Daytime temperatures will increase and nighttime temperatures will decrease. Also, daytime temperatures may be reduced because of higher flow velocities.

C. **Increased turbidity:**

Suspended solids will increase at the site and downstream when the new channel is connected to the stream. Suspended solids will remain high as the channel adjusts to new velocities, gradient, bank and bed material. Bed material movement will increase in the new channel and the new bed will lack organic food and substrate material.

Light transmissivity will be temporarily reduced in the new channel and downstream because of the increased sediment transport.

Erosion and sedimentation have been described as having the most insidious effects on aquatic life, in that the process may go unnoticed and the damage can be widespread, cumulative and permanent. Unlike most causes of poor water quality, erosion and the resulting increase in sediment transport may be triggered by channelization and then may continue to increase or even accelerate after the triggering circumstances have ceased. The impacts of channelization may persist on site and downstream for years as a result of thalweg establishment and channel adjustments.

D. **Runoff:**

The new channel may also increase or decrease runoff and sediment discharge from the adjacent land. If the runoff is agricultural drainage, salts, nutrients and pesticides may be added to the stream.
Improved drainage can increase the rate of groundwater discharge resulting in less water for sustaining stream flows during dry periods.

7. Other Public Rights

Navigation and esthetic quality may be affected by channel changes. Navigation might be impaired if the average depth or width of the new section is less than that of the old section.

Another extremely important consideration is the riparian rights of abutting property owners. The riparian rights of abutting property owners could be adversely affected by removing the stream channel from contact with their lands. In the reverse situation where a new river channel was made abutting a formerly nonriparian property, the Wisconsin Supreme Court rules that where an artificial channel has been made by changing the course of a river, the abutting owners and the public have the same rights in the new channel as if the channel were a natural water course (Lathrop vs. Racine, 119 Wis. 461 [1903]).

FINAL DISPOSITION

A stream straightening permit may be issued or denied by the Department without hearing based upon the statutory standards.

Any person objecting to the decision issuing or denying the permit may seek judicial review by serving and filing a petition in accordance with the provisions of sections 227.15 and 227.16, Stats., within thirty (30) days of the decision date.

MONITORING

Permits issued under Section 30.195 should require the applicant to notify the Department five days before starting work, and notify us within five days of the completion of work. There should be a follow-up inspection to determine whether that work was done in accordance with the approved plans. Enforcement action should be considered if the work deviates significantly from the plans.

EMERGENCY PROCEDURES

There should be no occasion for the emergency issuance of a channel change permit. Obstruction to the free flow of water may be removed under Chapter 88, Stats.

EDUCATION

Several publications provide answers to channel change questions. The handout "If you must alter a stream channel" provides guidance on proper construction practices for channel changes to minimize erosion and sedimentation. The pamphlet series "Public or Private I & 11" explains the concepts of ordinary high-water mark and navigability.

ENFORCEMENT

The Attorney General specified the elements of proof needed to convict someone of an illegal stream straightening in an opinion dated November 9, 1978 (67 Atty. Gen. 265). To obtain a conviction, the state must show that the defendant changed the course of a navigable stream, and that no permit to change the stream's course has been granted to the defendant under Section 30.195. The state need not show that the original portion of the stream was navigable, nor a specific intent to change the stream's course.
LIST OF REGULATIONS

a) Statutes: 30.195
b) Administrative Codes; NR 1.95, 115, 116, 150, 340
c) Manual Codes: 3506.1
d) Court Cases: Lathrop vs. Racine, 119 Wis. 461 (1903)
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Introduction

Department staff, especially in southeast Wisconsin, are being asked to review projects which channelize streams, and occasionally pave the streambed and banks with concrete to reduce localized flooding and/or accommodate other development needs such as design of storm sewers. We have already addressed one such project (Lilly Creek in the Village of Menomonee Falls). Because other similar projects will likely be submitted to us in the future, I believe it is appropriate to provide guidance to those staff who will be involved in the review process.

Guidelines

Stream channelization projects may cause significant adverse environmental impacts and have the potential to increase downstream flooding problems. Concreting of the streambed will likely magnify either of these effects. Therefore, staff who review proposed channelization projects should:

1. Presume that stream channelization is not the best overall solution to flooding or storm runoff problems;

2. Consider alternative approaches, including stormwater management and nonstructural flood damage reduction measures, which may reduce local flooding to an equivalent degree without causing significant adverse environmental impacts or increasing downstream flood damage potential;

3. Require project sponsors to show that they have considered reasonable (cost-effective and practical) alternatives to channelization and provide their reasons for selecting channelization as an alternative; and

4. Issue permits for, or recommend not opposing, channelization projects only when there are no other reasonable alternative to solving a recognized flooding problem, the adverse effects of channelization have been minimized to the extent practicable, and the project meets all other legal requirements.

This guidance is to be applied within the context of specific regulatory standards found in the statutes and rules that are applicable to channelization projects, including the Wisconsin Environmental Policy Act.
Background

Purpose of Stream Channelization Projects

Channelization, with or without concrete lining of the streambed, is typically used to improve the hydraulic efficiency of a channel so that it can carry more flow without overbank flooding. Projects are generally designed to meet conditions ranging from a 10-year storm to the regional (100-year) flood or more.

Most of these projects are designed to reduce or eliminate flooding problems and associated damages to existing development. Some are intended to provide new developable land by reducing the size of the floodplain and floodway. Existing flooding problems are legitimate concerns that need to be dealt with, and structural measures may often be part of the proposed situation. In areas where available land for development is in short supply, creation of additional developable land may also be a high priority for the municipality.

Department Concerns

Our concerns as a regulatory agency generally relate to 1) the environmental impacts of a proposed project, 2) public rights and interests in the waterway which is proposed to be channelized, 3) compliance of the proposed project with floodplain management standards and effects of the project on downstream development, 4) the possibility of resolving problems in a more effective manner or in a manner that addresses other problems (e.g., water quality) through alternative approaches such as stormwater management, and 5) the need to develop a comprehensive approach to resolve flooding problems rather than dealing with them on a piecemeal basis.

1. Environmental impacts: Channelizing of a stream, with or without concreting of the bed, typically removes most, if not all, of the existing aquatic habitat and causes a major change in channel characteristics and dimensions. Substrate and benthic organisms are removed, water levels in and adjacent to the channel (potentially including wetland areas) are typically reduced, and stream flows during dry periods will likely be reduced or eliminated. The entire food chain within the stream ecosystem can be directly or indirectly impacted to varying degrees. Depending on the value of the existing biotic community the consequences can be severe. Successive projects within a given watershed may have substantial cumulative effects on the main stream. Concreting reduces the potential for population of a channelized area and tends to ensure that a uniform channel cross-section will remain for an extended period of time. From a water quality standpoint, channelization tends to increase the quantity of sediment and other pollutants transmitted downstream since these will no longer settle out along a channelized stream segment. In streams where concreted and unconcreted sections occur in succession, substantial streambed instability can be expected in the unconcreted areas. Upland areas near the stream may undergo vegetative and other changes resulting from a more "flashy" flow regime and lowering of the water table.

2. Public rights and interests: Navigable streams are designated by the state constitution for special protection. Since statehood, the Supreme Court and the Legislature have identified a series of "public rights" in these navigable waterways, including boating (navigation), fishing, swimming, maintenance of environmental quality, and enjoyment of scenic beauty. Most of these rights would be adversely impacted by channelization. These effects would be felt in the channelized stream itself and in downstream areas (including waterways and stream discharges into). The issue then becomes the significance of the effect.

3. Floodplain management and public safety: Channelization typically increases velocities and the discharge of water to downstream areas. The usual result is increased flows and flood heights below channelized reaches. This can cause property damage, may result in downstream bridges or culverts not being able to handle the same frequency storms as previously, and will enlarge the 100-year
floodplain downstream from the project, thus placing downstream communities in a position where they need to regulate larger areas of land to limit future damages and affecting owners of property within these areas. State floodplain management standards recognize these problems and require that legal arrangements be made with all downstream property owners who may be affected by increased flooding during the regional flood. However, problems could occur at lesser floods, and these also need to be analyzed.

While ch. NR 116 does not explicitly require that a channelization project reduce the extent of the adjacent regulatory floodplain, a project that didn't would seem imprudent, might not be deemed beneficial and possibly would not meet the standards of ch. 30, Stats. This reduction may be accomplished by designing the channel to contain the 100-year flood within its banks or by a combination of channelization and improving the hydraulic characteristics of the (overbank) area next to the stream. The project must be adequately maintained by the local sponsor so that its ability to convey flow is not reduced.

As with any flood control project, there is a potential for the benefits of a channelization project to be partially or completely negated by upstream development which increases runoff and ultimately the 100-year flood discharge. In rapidly urbanizing areas, potential development of the watershed upstream from the project must be considered in estimating the design flows for the channel.

Another public safety concern is the potential safety hazard that may result from increased velocities in a channelized stream (especially with the streambed concreted). Recent experiences in Milwaukee and Fond du Lac have demonstrated that drownings can occur and ways to minimize the hazard must be considered.

4. Effectiveness of proposed solutions, including opportunities to resolve multiple problems:
Channelization, particularly if the streambed is concrete-lined, is an expensive approach which typically is limited to solving an immediate problem of overbank flooding near the channel. The primary effect of these projects is to pass flooding problems on to those downstream instead of resolving them within the immediate affected upstream area. When downstream flooding damages are considered along with the substantial cost of construction and the need to maintain the channelized stream segment to retain its design hydraulic characteristics, such projects may not prove to be cost-effective. Alternatives, especially stormwater management approaches which hold back flooding and reduce peak flows and water levels, should be considered. An especially attractive feature of stormwater management is that this approach can resolve both water quantity and quality problems through proper design.

5. Comprehensiveness of the approach: The “traditional” engineering solution of channelization focuses on getting rid of the water which reaches the channel as rapidly as possible. We are now more aware of that fact that in many cases runoff from development upstream within a watershed can lead to increased flood flows which will exceed the capacity of downstream channels, bridges, etc. This effect can be magnified by channelization which concentrates runoff more rapidly. Design of downstream facilities for "ultimate development" conditions, required by ch. NR 116, can be quite expensive. Few projects are looked at on a system-wide basis and yet each water shed operates as a system from both the hydrologic and hydraulic standpoint. Also, it seems unfair for downstream communities and individuals to continue to bear the cost of flooding problems caused by upstream development.

A more detailed list of specific potential impacts from channelization projects is attached.
The preceding discussion demonstrates a number of concerns which the Department may have with a proposed channelization project. Because of the potential impacts of channelization on both public safety and the environment, other ways of solving flooding problems should be given serious consideration by project sponsors and Department staff. The guidelines on page 1 of this memorandum are intended to aid in that consideration.

Presumption

To ensure that serious consideration is given to other means of solving flooding problems, the Department must begin its review of proposed projects by questioning whether channelization is a reasonable approach. This position should be changed only if the project sponsor, and any independent investigation by the Department or by others, demonstrates that channelization is reasonable under the circumstances. This means that other potential measures to alleviate the flooding problem do not work, are too costly, or cause environmental or public safety problems similar in magnitude to those resulting from channelization.

Alternative Approaches

Many alternatives are available. A partial list is included as Attachment 2. Nonstructural measures are most effective in protecting new development from flood damages. Structural approaches may be an appropriate means of reducing damage to existing development. Nonstructural measures generally reflect an adaptation of human activity to flooding conditions while structural measures are usually an effort to limit flooding to conform to existing or planned human activity. The Department's policy, expressed in s. 87.20, Stats., and ch. NR 116, Wis. Adm. Code, is a preference for nonstructural measures. In some cases, these will not solve the particular flooding problem, but they should be given serious consideration before such a conclusion is reached. These approaches are more flexible and adaptable to change, have fewer irreversible effects, and do not pass problems on to the next downstream property owner or community.

Minimization of Impacts

Where other solutions are not reasonable and channelization is the continued preference of the project sponsor, Department staff must consider whether the project meets applicable requirements and take a position accordingly. Before this occurs, we should seek modifications in project design, including the potential for mitigation, to reduce or offset the adverse impacts of the proposal. When this has occurred, we should normally issue the required permits(s) to take an "as interest may appear" position at any contested case public hearing held on the proposal. In some cases, we may conclude that a project must be opposed because it is still contrary to regulatory standards, even after full consideration of alternatives and minimization of adverse impacts.

Procedural Approach

Staff should, as soon as they become aware of a proposed channelization project, actively work with the sponsoring community to explore alternatives and ensure their full consideration. Design alternatives which would minimize the adverse impacts of channelization should also be explored. Full use of the environmental assessment process should be made to document impacts and the consideration of alternatives and to obtain public involvement in the decision-making process. Potentially affected persons and municipalities should be informed and given a chance to express their views.

Conclusion

These guidelines and the preceding discussion are meant to provide a more consistent and comprehensive framework for Department regulatory review of proposed stream channelization projects, the guidance has been drafted to address "large" projects in urban areas.
Also, you should keep in mind that this is guidance for applying existing legislative and Natural Resources Board policy and is not, obviously, policy itself.
ATTACHMENT 1

Partial List of
Specific Potential Impacts of Stream
Channelization Projects

1. Changes in hydrologic conditions, including lowering of the water table, reduction of bank storage, drainage of wetlands, greater variation in stream flows, more intermittent flows, and increasing uniformity of flow conditions;

2. Increases in downstream flooding problems, including damage to development, damages to or reduced effectiveness of public facilities and infrastructure, and increases in areas that must be regulated to reduce flood hazards;

3. Adverse effects on water quality, including increased nonpoint pollution, erosion of the channel downstream from the project, reduction in the ability of the channel to contain or filter sediments or other contaminants, increased temperatures due to decreased discharges, and decreases in dissolved oxygen as a result of increased temperatures and contamination and loss of assimilative capacity;

4. Channel instability upstream and downstream from a proposed project caused by increasing velocity, "flashy" flow conditions, erosion of the channel, etc.;

5. Loss of or changes in aquatic habitat and/or habitat diversity leading to undesirable shifts in biological production and the diversity, density or composition of aquatic communities;

6. Losses of or changes in terrestrial habitat and/or habitat diversity leading to undesirable shifts in biological production and the diversity, density or composition of terrestrial communities;

7. Barrier to fish migration and to "travel lanes" used by wildlife; and

8. Reduction in aesthetic values of streams and adjacent riparian areas.
ATTACHMENT 2

Partial Listing of Measures to Reduce Flood Damages

"Structural"

Levees, floodwalls, or dikes

"Channel Improvements:
  Stream channelization
  Creation of overflow channels
  Removal of obstruction

Flood Control Dams
  Impoundments ("wet" dams)
  "Dry" dams

Floodproofing of Structures

"Nonstructural"

Runoff Control
  Increase infiltration
  Reduce rate of runoff

Flood Insurance

Warning or Evacuation

Floodplain zoning

Purchase of land

Information to prospective buyers

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PMMS Response
Insertion: Chapters 100, 110, 120, Water Regulation Handbook

FROM: Scott Hausmann - WZ/6

SUBJECT: Section 30.19(lm)(e) Exemption From Permit Requirements for Authorized Enlargements

1987 Wisconsin Act 374, the new Chapter 30, changed section 30.19 to allow for maintenance dredging of existing authorized enlargements. Now that we've has a little experience with this section several questions have come up which I'll address in this memo.

1. NR 340 regulates non metallic mining and specifies the requirements for review and permitting. How does this administrative code relate to the exemption for work required to maintain authorized enlargements found within section 30.19?

   All existing permits authorized under the old section 30.19 and NR 340 remain unaffected. The status of mining activities issued since adoption of the Act 374 will depend on how the permit was drafted. If the permit cited only section 30.19, the exemption found within section 30.19 is applicable and we could not require a permit for work required to maintain the original dimensions without revoking the original authority. You should note that section 30.07 allows for the revocation of Chapter 30 permits "for good cause".

   When appropriate, future permits for non metallic mining should include specific conclusions of law specifically state within the order section that additional permits are necessary for maintenance dredging of unconnected enlargements.

2. Section 30.07 restricts the length of permits to 3 years with the possibility for a 23 year extension. Section 30.20(2) allows the department to issue contracts and permits for up to 10 years. Since the two statutes conflict, the more specific language in s. 30.20 stats., governs for dredging permits. How will this affect permits issued under NR 340?

   Permits issued prior to the enactment of Wis. Act 374 are unaffected. Permits issued after the enactment are subject to these time frames and must be repermitted upon their expiration. If a permit contains a s.30.20, stats., permit or contract, we can use the longer time frames outlined in that statute.

3. Some harbors are or have been authorized by use of section 30.19. Can the Department retain authority over dredging operations?

   The exemption language within section 30.19 does exclude us from requiring a future permit but we should be able to draft permits to allow our continuing review. For example, a 30.19 permit could be conditioned with a requirement to notify the department of any future dredging and allow for a 30 day review period. I suggest that you use such a provision cautiously and coordinate with the bureau.
4. Some 30.19 permits issued before the enactment of Wisconsin Act 374 specified a sunset date within the permit. How are these permits affected by the exemption from permit for maintenance dredging found within s. 30.19 Wis. Stats.?

We construe any permit limitations issued before the enactment of Act 374 as being valid and unaffected by the exemption specified in section 30.19(lm)(e). It would be unreasonable to assume that specific permit conditions, necessary to protect the water body involved, would be overruled by future statutes. A contrary assumption would force us to anticipate future legislation within the permit process. Therefore, an authorized enlargement with an expired permit date will be considered completed and will require new authorization before maintenance dredging can occur. If no expiration date was specified within the original 30.19 permit conditions, authorization for the enlargement must be considered "active" and the exemption found within s. 30.19(lm)(e) valid.

Reviewed by: Ken Johnson
Robert Sonntag
Mike Cain
DATE: November 16, 2000
FILE REF: Chapter 110 - Water Regulation Handbook
TO: Water Regulation Guidebook Holder
FROM: Susan Sylvester, AD/5
SUBJECT: Authorizing Ditch Fills for Wetland Restoration

This memo establishes procedures to be used beginning December 1, 2000 to authorize ditch fills for wetland restoration projects. Please insert the following pages in Chapter 110 of your Water Regulation Guidebook.
Authorizing Ditch Fills For Wetland Restoration

The purpose of this guidance is to establish a consistent procedure to authorize wetland restoration projects involving navigable ditches that were originally constructed to drain wetlands. Restoration of a wetland may involve restoring a ditch to its original (preconstruction) condition. This may involve the placement of fill into the ditch for the purpose of restoring the original wetland hydrology. Ditch filling projects may be approved under s. 30.195, Stats. These projects may qualify for a permit under s. 30.195, Stats., because they are changing the channel from the existing dredged configuration to a natural braided channel or diffuse surface or groundwater hydrology. The projects would still be required to meet the applicable standards and conditions of s. 30.195, Stats., including improving the economic or aesthetic value of the owner's land, not adversely affecting flood flow capacity and not being detrimental to public rights or the rights of other riparians. It also must meet the requirements of applicable administrative codes, including NR 103 wetland water quality standards. If the diverted water does affect other landowners, then the project may be completed only if permission from the affected landowners is obtained.

Background:
Historically, drainage projects have been undertaken by straightening stream channels and construction of lateral ditches. Straightening streams and ditch construction modified natural groundwater and surface water flow patterns within watersheds. The result of these drainage projects has been a conversion of wetlands to drained lands. Both channelization and ditch construction have had negative impacts upon instream biota, habitat and wetland functional values.

Many habitat improvement projects have been proposed to restore channel morphology (meanders) in order to enhance and restore instream aquatic habitat, generally for the purpose of enhancing fisheries. Now there is an increasing demand to restore wetland habitat. Stream rechannelization (restoring meanders) and ditch filling are two methods for restoring drained or degraded wetlands to pre-disturbance conditions.

There are several possible scenarios for restoration projects. If a ditch has stream history, then filling it would not be a historic restoration of hydrology and should not be allowed (unless the project also involves re-establishing the original channel). If a ditch does not have stream history but agriculture has been discontinued a property owner does not have a clear regulatory mechanism to fill the ditch. This guidance establishes that the procedure under s. 30.195, Stats., be applied for authorizing these projects.

Significance:
Thousands of acres of wetland have been restored under the Wetland Reserve, Conservation Reserve and other programs. The traditional methods of wetland restoration involve removing or breaking field tiles, plugging ditches and sometimes creating berms or water control structures. As wetland restoration science continues to evolve, we are finding that these traditional restoration methods often will not adequately recreate the pre-disturbance hydrological conditions. Projects with incomplete hydrologic restoration may fail to re-establish high quality wetlands and are often dominated by invasive species. Also, ditch plugs, berms and water control structures require periodic maintenance.

Back filling ditches to restore the original hydrology to re-establish diffuse flow patterns can be maintenance method of wetland restoration. If dredge spoil banks are reconfigured to restore the natural land contours, it also results in a closer approximation of pre-disturbance conditions. Natural vegetation seed banks may still be viable on some sites but will not survive hydrologic conditions that are not similar to the pre-disturbance conditions. Many wetland scientists believe that ditch filling and recontouring to pre-disturbance conditions is a more complete method with a greater likelihood of resulting in sustainable, resilient high quality wetlands.
Affected Parties:

This issue affects all individuals, agencies and organizations that work on wetland restoration projects including WDNR, US Natural Resources Conservation Service, US Fish and Wildlife Service, County Land Conservation Departments, Wisconsin Waterfowl Association, Ducks Unlimited and others. While WDNR regulatory workload may increase on some projects, predictability and consistency are substantially increased over other ways of handling these projects.

This document is intended solely as guidance and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. This guidance does not establish or affect legal rights or obligations and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin—or the Department of Natural Resources. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.
GUIDANCE PURPOSE AND DISCLAIMER

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance cannot be relied upon and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes, common law and administrative rules to the relevant facts.

This file is an electronic version of a chapter of the Waterway and Wetland Handbook. This document was scanned from the master handbook chapter kept at the Bureau of Fisheries and Habitat Protection central office in Madison. All effort was made to ensure this scanned electronic copy is an actual copy of the hardcopy document. Due to the electronic scanning process, there may be rare instances of typographical errors, omissions or improperly formatted pages. Please refer to the master handbook if accurate transcription is required.

PURPOSE

In order to accommodate municipal development it is often necessary for navigable waterways to be altered. Section 30.196, Wis. Stats., was developed so municipalities could totally enclose navigable waters, usually streams, when alternative actions are not sufficient.

MECHANISM

The enclosure of navigable waters by municipalities is regulated by permit.

HISTORY

The first specific legislation authorizing the enclosure of navigable watercourses was Chapter 171, as modified by Chapter 459, Laws of 1963. These law modified s. 59.96(6)(a), Wis. Stats., and created s. 59.96(6)(ab). Metropolitan sewerage commissions of counties containing cities of the first class (Milwaukee) were authorized to enclose watercourses. According to Mr. Ewald Moerke, who was legal counsel for the Milwaukee County Metropolitan Sewerage Commission in 1963, the commission sponsored the legislation because they felt existing statutory authority was insufficient to allow this type of activity.

In the early 1970's a few permits (combination 30.12 and 30.195) were issued authorizing stream enclosures. Then on August 28, 1978, a s. 227.075 hearing request by the city of Green Bay for enclosure of Bairds Creek (Docket 3-II476-400) was denied by Department Secretary Anthony Earl partially on the basis that the department had no authority to issue such a permit except as authorized in s. 59.96(6)(ab).
In order to provide for municipal enclosure of streams, Chapter 19, Laws of 1981, was enacted by the legislature and became effective on July 25, 1991.

**STANDARDS**

**Statutory**

"A municipality may enclose waters into an enclosed drain, conduit, storm sewer or similar structure if the department grants the municipality a permit." (emphasis added)

The legislature specifically limited the authority to enclose navigable waters to municipalities, and then only after getting a permit from the department.

"The department may grant this permit to a municipality after following the notice and hearing requirements under s. 31.06, Wis. Stats., if it finds that granting the permit:

1. Is in the public interest;
2. Will not violate public rights; and
3. Will not endanger life, health and property."

The municipality should be required to supply reasons why their proposal meets the statutory standards since the department will undoubtedly be evaluating the standards as they apply to the waterway. The municipality's reasons will likely relate to economics, development, highway construction or municipal services. Keep in mind that these reasons may have just as high a standing or be as important as our application of the standards to the waterway. An attempt should be made to balance our "traditional" evaluation of standards with the municipality's evaluation.

The statute does not address private riparian rights. Presumably, since municipalities have the power of condemnation, any loss of riparian rights would be a private issue between an individual and the municipality.

**Administrative Code**

1. **Wetlands.** NR 1.95, Wis. Adm. Code, establishes general standards to be applied by the department decisions affecting wetlands. The department presumes that wetlands are not to be adversely impacted or destroyed. NR 1.95 further specifies the balancing-test to be used by the department when determining the potential adverse effects of a project on a woodland versus the benefit to the applicant.

2. **Shoreland areas.** NR 115, Wis. Adm. Code, establishes administrative standards to be followed by counties in their administration of shoreland zoning ordinances. These standards should be reflected in the permit.

3. **Floodplain areas.** NR 115, Wis. Adm. Code, establishes administrative standards to be followed by local units of government in their administration of flood plain zoning ordinances. Permits should require applicants to conform with standards established in NR 116.

4. **Environmental Impact.** NR 150, Wis. Adm. Code, establishes procedures for determining whether a given project requires an Environmental Impact Statement (EIS). Enclosures are type II actions for which an environmental assessment must be prepared.
5. **Navigational Clearance.** NR 320, Wis. Adm. Code, establishes clearance, flood flow, plan and information requirements which may be applicable to enclosures.

**PROCESS**

**Application**

Municipalities must submit an application for a permit using the joint application form. The locational, plan and floodplain information described in Chapter 85 of the Handbook should be submitted. In addition, the application should indicate ownership of properties adjacent to the enclosure for noticing purposes. The number of floodplain cross sections required is dependent on the length of enclosure. Generally, at least three should be submitted; at either end and in the middle.

**Field Investigation**

The field investigation should be conducted to determine the accuracy of the information submitted, whether the project will comply with state or local codes and ordinances, and whether the statutory standards will be met. To determine if granting the permit:

1. **Is in the public interest**
   
   Consider:
   
   a. scenic beauty
   b. fish and game habitat
   c. water quality
   d. erosion potential and the need for riprap or other protection
   e. need for economic development
   f. need for municipal facilities
   g. need for highway development

2. **Will not violate public rights**
   
   Consider:
   
   a. navigation and its various incidents
   b. "Trust Doctrine" preservation philosophy

3. **Will not endanger life, health and property**
   
   Consider:
   
   a. adequacy of enclosure design
   b. potential for increased flooding both upstream and downstream
   c. public safety
   d. surface and groundwater drainage

**FINAL DISPOSITION**

If a permit is granted (no opposition to notice), include requirements needed to ensure conformance with statutory, administrative code or local ordinance provisions. If opposition to the project has been registered by the
department or a member of the public, a public hearing will be required. A Division of Natural Resources
Hearings examiner may issue or deny the permit after hearing.

Any person objecting to the decision may seek judicial review by serving and filing a petition in accordance with
the provisions of sections 227.15 and 227.16, Wis. Stats., within thirty (30) days of the decision date.

MONITORING

Permits should require the applicant to notify the department five days before starting work and within five days
of completion of the work. There should be a follow-up inspection to determine whether the work was done in
accordance with the approved plans. Enforcement action should be considered if the work deviates significantly
from the plans.

ENFORCEMENT

Section 30.15, Wis. Stats., provides for a forfeiture of up to $50 a day for any structure in violation of s. 30.12. It
also declares an obstruction to be a public nuisance and abatable at the suit of the state or any citizen.
Enforcement should be considered if any enclosure was built without proper authority, exceeds the limits of
approval or is improperly constructed. Action under this statute may be taken in local court. If warranted,
abatement pursuant to s. 23.79(3) should be recommended.

Section 30.33, Wis. Stats., can be used for abatement if an enclosure was build without proper authority and in
those instances where local court failed to order it. These actions would be initiated through the Attorney
General's Office.

EDUCATIONAL MATERIALS

Pamphlet "Wisconsin's Water Regulation Programs Work for You"
Pamphlet "Public or Private I Navigability"
Pamphlet "Public or Private II The Ordinary High-Water Mark"

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We have been asked to provide guidance concerning the applicability of Section 30.18, Wis. Stats., as it may or may not apply to the ability of an agricultural user to enclose a navigable waterway.

The particular case involved deals with the application of a farmer to turn a navigable stream into a combination grassed waterway and conduit, the conduit being placed below the surface for the purpose of carrying base flow.

Section 30.196, Wis. Stats., provides that a municipality, under certain conditions, may enclose a portion of a navigable stream. The legislature intended that only municipalities be allowed to enclose streams. This exclusive privilege seems fairly clear under this statute because only municipalities were mentioned.

Section 30.18 deals with the diversion of streams for maintaining the normal flow or level of lakes and streams, or for agricultural benefits. Section 30.18 also allows for construction of canals and conduits for such purposes. However, Section 30.18, Wis. Stats., would not allow for the enclosure of a portion of the base flow of a stream. The rationale for this statement is as follows:

1. Section 30.18, Wis. Stats., is titled "Diversion of Waters from Lakes and Streams." The word diversion implies that the water is taken, channeled, conveyed or moved in some fashion from its existing course and conveyed to another different course. In this particular situation, the applicant's intent is to convey a portion of the water along the same water course in a submerged pipe. This is not a diversion from the stream but rather an enclosure of a portion of the flow of the stream.

2. Section 30.18, Wis. Stats., deals with the temporary diversion of surface waters. The enclosure of a portion of the base flow of a stream is not a temporary change but rather is a change that will persist for perpetuity. A permanent change to the water course would more appropriately be addressed in Section 30.196, or Section 30.195.

We conclude that the only section of the statute that deals with the enclosure of navigable water is Section 30.196. Because Section 30.196 enunciates only municipalities, no other entities are endowed with this riparian right. Section 30.18 is not intended as a mechanism to enclose navigable water but rather to enable a small group of users to temporarily divert surface waters.
Reviewed by:
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GUIDANCE PURPOSE AND DISCLAIMER

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance cannot be relied upon and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes, common law and administrative rules to the relevant facts.

This file is an electronic version of a chapter of the Waterway and Wetland Handbook. This document was scanned from the master handbook chapter kept at the Bureau of Fisheries and Habitat Protection central office in Madison. All effort was made to ensure this scanned electronic copy is an actual copy of the hardcopy document. Due to the electronic scanning process, there may be rare instances of typographical errors, omissions or improperly formatted pages. Please refer to the master handbook if accurate transcription is required.

Regulating the removal of material from the bed of waterways.

PURPOSE

The removal of material from the bed of waterways is regulated to protect public rights against adverse impacts of "dredging." Potential impacts include turbidity, disturbance or destruction of aquatic organisms and habitat, release of contaminated materials, nutrients and other materials entrapped in the sediments and dissolved oxygen depletion.

MECHANISM

Section 30.20, Wis. Stats., regulates the removal of materials from the beds of waterways. A permit is required for streams and flowages where the bed is not owned by the state (see Handbook Chapter 30). A contract is required for lakes where bed material owned by the state is being removed. Dredging contracts can also be issued to authorize the sale or lease of minerals, ores, or materials beneath the bed of waterways. The court in State v. Dwyer, 91 W (2d) 440, (Ct. App. 1979), ruled that s. 30.20, Wis. Stats., applies to the removal of material from the bed of all waterways, navigable as well as nonnavigable.

HISTORY
Removing materials from the beds of navigable waters was first regulated pursuant to Chapter 85, Laws of 1872. Under this act is was a misdemeanor for any person to remove stone or rock from the bed of Lake Michigan. Although any person removing less than 50 pounds per month or any riparian proving that the removal did not endanger the property of others could not be found guilty under the act. The act also allowed municipalities to prohibit the removal of gravel, rock or stone from the bed of Lake Michigan within a strip extending 20 rods lakeward of the low water mark. However, anyone taking less than 50 pounds per month could not be deemed guilty of an offense.

The Local government's authority was extended by the statute revisers in 1878 (Section 4570), Stats.) to include protection of all navigable waters by prohibiting the removal of rock or stone from the natural bed of Lake Michigan, Green Bay, Lake Superior, Mississippi River or other navigable waters by non-riparians without consent of the Local government. Section 4570 was amended by Chapter 137, Laws of 1919 to regulate the removal of sand, gravel, clay or other substances in addition to rock and stone. Chapter 4 Laws of 1925, renumbered section 31.025, Stats., by Chapter 696, Section 264, Laws of 1955. Chapter 135, Laws of 1957 finally repeated s. 31.025, Stats., 34 years after removing materials from the beds of waterways was first regulated by the state.

Chapter 410, Laws of 1923 created Section 31.02(5), Wis. Stats., the first state control over removing materials from the beds of navigable takes. This section authorized and empowered the railroad commission to issue contracts for removing material from the bed of any navigable take. The Law allowed contracts up to 5 years if the removal was “in the public interest and the interest of the state.” The Law also required the Railroad Commission to “fix and determine the compensation to be paid the State of Wisconsin for material so removed…”

The legislature amended Subsection 31.02(5) by Chapter 368, Laws of 1939 to eliminate contract compensation requirements for municipalities if the material was to be used for municipal purposes and not for resale.

Chapter 219, Laws of 1941 created Subsection 31.02(6), Wis. Stats., to allow issuing contracts for removing bed materials from outlying waters. Chapter 219 also created Section 20.203, Wis. Stats., which specified that all money collected from the issuance of dredging contracts was to go to the general fund to be appropriated to the Conservation Commission and the public service commission for patrolling outlying waters to enforce the condition of the contracts and "all Laws relating to conservation in such outlying waterways."

Chapter 712, Section 2, Laws of 1951, created Subsection 31.02(7), Wis. Stats., which prohibited people from removing bed material from any navigable lake or outlying waters without a contract and required that no person should "remove any material from the bed any lake or stream not mentioned above so as to leave any hole or other condition dangerous to human life."

Chapter 441, Laws of 1959, repealed Section 31.02(5) to (7), Wis. Stats., and created Section 30.20. This section required a contract for removing material from the bed of any navigable lake or from any outlying water. It prohibited removal from any other lake or stream that would leave a hole or other condition dangerous to human life and established a $1,000 fine for violations.

Chapter 631, Laws of 1961, renumbered and amended Section 30.20(2), Wis. Stats., to become Section 30.20(2)(a). This act also created Section 30.20(2)(b), which required contracts for the "removal of minerals, ore, and other materials from the beds of navigable lakes and waters."

Through Chapter 614, Section 7 and 8, Laws of 1965, Section 30.20(l)(b), Wis. Stats., was amended to require permits for the removal of bed materials from any lake or stream not mentioned in paragraph 2 (navigable lakes and outlying waters). Section 30.20(2)(c) was created authorizing the Department to issue permits if the removal was consistent with the public interest. It also gave the Department the authority to adopt administrative rules.
Chapter 418, Laws of 1977, created Section 30.10(4)(c), Wis. Stats., to limit the Department's authority in farm drainage ditches. Farm drainage ditches in organized drainage districts were declared not navigable except where it could be shown that the ditches were navigable streams before ditching or had a previous stream history.

Chapter 391 of the same year amended Section 30.20(2)(a), Wis. Stats., to exempt additional municipal units (e.g. inland lake protection districts) from paying contractual fees for dredging.

Chapter 240, Laws of 1981, created Section 30.202, Wis. Stats., relating to the dredging and disposal of dredged materials in and near the Mississippi, St. Croix and Black rivers by the U.S. Army Corps of Engineers (Corps). This section allows the Department to enter into a memorandum of agreement with the Corps to implement recommendations of the Great River Environmental Action Team (GREAT) reports. The Law allows the use of GREAT-designated disposal sites under appropriate conditions and allows the consideration of sites not specifically designated in the GREAT reports.

Chapter 339, Laws of 1981, amended Section 30.10(4)(a), Wis. Stats., to change the applicability of navigability to farm drainage ditches. The revised subsection applies to any farm drainage ditch used for draining agricultural land regardless of whether it is in a drainage district. Such farm drainage ditches are declared not navigable unless they are shown to have been navigable streams before ditching. Similar changes were made in ss. 87.30(Lm)(b) and 144.26(2)(b)2.

Chapter 330, Laws of 1981, renumbered Section 30.20(l)(c) to Section 30.20(4) and created a new Section 30.20(l)(c). This subsection provides an exemption from permit requirements for removing materials from the bed of farm drainage ditches which were not navigable streams before ditching. However, the Department may require permits if the removal will have long-term adverse affect on coldwater fishery resources or destroy fish spawning beds or nursery areas.

**LEGAL AND ADMINISTRATIVE INTERPRETATIONS**

*Wisconsin Supreme Court Decisions*

1. **Angelo v. Railroad Commission**, 194 Wis. 543 (1928): Several significant questions were answered in the decision. First, requiring contracts for dredging was found to be constitutional. The court determined that any contract the state enters into to remove bed material would require compensation. The Court also reaffirmed that the state owns the bed of navigable lakes and riparian owners own the beds of navigable rivers and streams subject to the public rights incident to navigation.

2. **Reuter v. Department of Natural Resources**, 43 Wis. 2d 272 (1969): This decision requires that the Department, when considering an application for a dredging permit, consider any effect on water quality or increase in water pollution which might result from granting the permit. While the Department must make a specific finding regarding water pollution, the weight of this finding depends upon the Department's judgment. Furthermore, the term "public interest" was stated to involve the public's use of the waterway for the all incidents of navigation (sailing, rowing, canoeing, bathing, fishing, hunting, skating, and other public purposes).

*Wisconsin's Court of Appeals Decisions*
1. **State v. Dwyer**, 91 Wis. 2d 440 (Ct. App. 1979): This decision stated that s. 30.20, Wis. Stats., applies to navigable and nonnavigable streams. Also, s. 88.90(3) does not negate the requirement to get a s. 30.20 permit.

**Opinions of the Attorney General**

1. **OAG-109-74** (October 1, 1974): A riparian owner must obtain a contract or permit under s. 30.20, Wis. Stats., prior to removing material from the bed of any navigable water between a legally established bulkhead line and the ordinary high-water mark. This requirement holds whether or not the area between the bulkhead line and the ordinary high-water mark has been fitted.

**Department Interpretations**

1. A legal opinion dated March 5, 1973, indicates that authority to dredge is not required for removal of a floating bog. However, section 30.125, Wis. Stats., relating to the removal of aquatic vegetation, and various provisions of Chapter 29 dealing with rare and endangered plant species may come into play. See Handbook Chapter 190. Furthermore, s. 30.15(2) allows placement of a temporary boom in navigable waters for the purpose of catching weeds, provided that the Department consents to that placement. This provision would appear to be the only authority normally required under Chapter 30 for removal of floating bogs.

2. A May 2, 1974 legal opinion was issued concluding that the words "any material" in a. 30.20, Wis. Stats., would not require a permit for removal of man-made obstructions such as bridge abutments.

3. A legal opinion dated February 15, 1980 indicates that the Department is not required to deny a s. 30.20, Wis. Stats., dredging permit merely because the county cannot or will not issue a permit which is required by the county zoning ordinance for dredging in the floodplain. However, the Department may dismiss an application for a s. 30.20 permit, in such a situation, without prejudice, refusing to consider the application for a s. 30.20 permit until a county permit has been issued. If the Department does issue a s. 30.20 permit, it should contain a provision that the permit will not be effective until a county permit is obtained.

4. A January 2, 1981, program guidance memorandum on Chapter NR 345, Wis. Adm. Code, commented section by section on implementing the rule. The comments did not constitute standards or mandatory procedures, but rather direction and details for staff use. A copy is attached.

5. A February 18, 1982 program guidance memorandum provides direction and details for staff use on implementing Chapter NR 347, Wis. Adm. Code. This guidance has been incorporated in the "Application" section of this chapter.

6. In a March 4, 1982 memorandum, Robert W. Roden, Director of the Bureau of Water Regulation and Zoning discussed the interaction between the regulation of utility trench crossing excavations under Chapter 30, Wis. Stats., and solid waste requirements contained in Chapter NR 180, Wis. Adm. Code. The applicability of Chapter NR 180 was concluded to be based on the net volume of material to be placed in an upland site. NR 180 automatically exempts the disposal of under 3,000 cubic yards of dredged material from the solid waste licensing procedures. Disposal of over 3,000 cubic yards would require individual review.

**STANDARDS**

**Statutory Standards**
Section 30.20, Wis. Stats., requires that:

1. Dredging permits be consistent with the public interest;
2. Dredging contracts be consistent with public rights, protect the public interest, and the interests of the state;
3. No contract can run for a period longer than 5 years; and
4. No mining contract can run for a period longer than 75 years.

Administrative Standards

NR 1.95, Wis. Adm. Code, establishes general standards to be applied by the Department in decisions affecting wetlands. The Department shall consider proposals which require its approval with the presumption that wetlands are not to be adversely impacted or destroyed and that the Least overall adverse environmental impact shall result.

NR 115 establishes administrative standards which must be followed by counties in their administration of shoreland zoning ordinances. These standards shall be reflected in permits and contracts issued pursuant to s. 30.20, Wis. Stats.

NR 116 establishes administrative standards which must be followed by local units of government in their administration of floodplain zoning ordinances. These standards should be reflected in permits or contracts issued under s. 30.20, Wis. Stats.

NR 150 prescribes the proper level of environmental assessment for various kinds of dredging. An environmental impact screening worksheet is required for all non-maintenance dredging and nonnavigable waterway dredging which involves draining or filling of wetlands.

NR 180 governs the procedure and standards for solid waste disposal sites and facilities. All dredging projects require review under Chapter NR 180.

NR 200 governs the procedures and standards for the Wisconsin Pollutant Discharge Elimination System (WPDES) under chapter 147, Wis. Stats. An individual WPDES permit is required for dredging project discharges which do not meet the applicability criteria for the general WPDES dredging permit issued under s. 147.023, Wis. Stats. (copy attached)

NR 340 would only apply when the dredging is for the commercial extraction of sand and gravel project. Extensive additional procedural requirements are found in NR 340. Bonding and restoration plans are also required in NR 340.

NR 345 does not include standards. It reiterates the conclusion in the case Wisconsin v. Dwyer, which requires a permit from the Department to authorize removal of materials from the beds of nonnavigable waterways as well as navigable waterways, and contains general procedures to be followed for all dredging activities.

NR 346 (dredging contract fees) does contain standards. The primary purpose of this rule is to establish two different classes of dredging projects, commercial and noncommercial, to clarify procedure and establish the amount required for bonds associated with dredging projects.
NR 347 (regulation of dredging projects) does not include standards. The purpose of this rule is to provide a single mechanism to assure that requirements of the water regulation program, the industrial wastewater program, the waste treatment plan approval program, the WPDES and the solid waste management program are appropriately reflected in decisions which regulate dredging made by the Department.

**PROCESS**

**Application**

An application for a permit or contract under s. 30.20, Wis. Stats., to remove material from the bed of a waterway must include the information specified in NR 347.07 - 347.11, Wis. Adm. Code. It is important to note that all informational requirements included in NR 347 will be required for only a few projects. In general, only projects proposed for an environmentally sensitive dredging area or disposal location or those involving hazardous wastes or PCB's will call for full application of all information requirements of NR 347. It is up to Department staff to determine the amounts of information required for most other dredging projects. This discretion is allowed by Section NR 347.05(5). Figure 1 and Table 1 give the process of determining information needs.

**Notice Requirements**

The issuance or denial of a dredging permit or contract does not require either a notice of the proposed action or a public hearing.

Consideration should be given to issuing a news release for large, complex, or environmentally sensitive dredging projects. Many dredging projects can significantly affect the environment and public and private rights in the waterway. A public information hearing can be held by Department staff if significant issues or public interest is involved.

A news release is required if an environmental assessment is done. See subsection NR 150.04(8)(a), Wis. Adm. Code, for details.

**Field Investigation**

For a proposed dredging project the area to be dredged and the areas where the dredged material may be placed should be evaluated. The degree of Investigation necessary depends on the project's size and local environmental characteristics. Pertinent considerations regarding the area to be dredged include aquatic habitat, public use of the area, and how dredging may affect both those concerns.

During the excavation phase of a dredging operation, the following effects are commonly short-term:

- creation of turbidity and reduction of light penetration,
- disturbing and destruction of aquatic organisms and habitat,
- resuspension of contaminated materials in the water column,
- dissolved oxygen depletion,
- release of nutrients and other materials entrapped in the sediments, and
- creation of floating scum and debris

Long-term effects of the excavation phase of a dredging operation are related primarily to modifications of bottom geometry and the benthic community. The formation of trenches or isolated areas of overdredging below the normal grade of the bottom tends to create pockets of stagnant water wherein oxygen depletion and the degeneration of the biologic communities are more likely to occur.
Environmental and aesthetic concerns with the material transportation phase of dredging are related to operating techniques. Mechanical dredges all transfer the excavated material dither directly to adjacent disposal sites or into trucks or scows. To reduce turbidity and careless spreading of the material it is essential that buckets are maintained in good condition to ensure a tight fit when closed and scows or dump bodies are sealed. With hydraulic dredges, transport is either in bulk as with hopper dredges or by slurry in a pipeline. Apart from badly-fitting couplings, breaks or other maintenance difficulties, pipeline transport itself is unlikely to cause significant environmental impacts.

A second area of concern is the proposed disposal site for the dredged material. In general, placement of dredged material destroys existing vegetation, small mammals and immobile organisms. Depending on the material's composition and subsequent disturbance of the site (for material re-use, as an example), dredge material disposal sites frequently revegetate after a period of a year or two. However, experience has shown that significant revegetation will not occur in some cases for up to ten years following spoil placement such as along the Mississippi River.

After hydraulic dredge spoil has been placed in a containment area, the carriage water may require disposal if evaporation/infiltration can't handle the volume. Typically, this water is returned to the lake or stream from which the material has been dredged. Returned water may contain substantial amounts of suspended solids, heavy metals, pesticides and hydrocarbon residuals (oil and grease). The nature of the returned water relates to the dredged material’s physical and chemical characteristics and how the spoil disposal areas is operated. Consider how carriage water return may affect the receiving water. Monitoring and reporting of these discharges may be required pursuant to toe Wisconsin Pollutant Discharge System requirements. Additional problems that may have to be considered include seepage control, contaminant transfer to the external environment by wildlife, surface drainage control and aesthetic aspects. Table 2 summarizes some of the potential effects of dredging and dredged material disposal.

Disposal of dredged material must be accomplished in conformance local zoning ordinances, section 404(+) and solid waste disposal regulations. A permit is not required for U.S. Army Corps of Engineer maintenance dredging projects although the disposal area may require solid waste approval pursuant to S. 144.04, Wis. Stats., and NR 180, Wis. Adm. Code.

Chapter NR 180, Wis. Adm. Code, establishes guidelines and procedures to be followed in dealing with dredge spoil and the interaction between the solid waste and water management program.

NR 180.13(2)(b)(4) indicates that all dredge spoil disposal sites are exempt from solid waste regulations except, (1) sites where more than 3,000 cubic yards of dredge spoil taken from Lake Michigan, Lake Superior, the Wisconsin River, the Fox River, or the Mississippi River are disposed, or (2) sites where dredge spoil taken from inland lakes treated with arsenic are disposed. This same section includes a catch-all provision that would allow the Department to regulate disposal sites that might otherwise be exempt if we make a determination that such disposal might pollute ground or surface waters. This catch-all provision should be used only for its intended purpose, that is to allow us to regulate a site that is otherwise exempt where the Department is fully aware of real or potential problems. It should not be used as a decision criteria for nonexempt sites or as a reason to subject sites with no known problems to further scrutiny or delay.

In addition, NR 180.13(2)(c) provides the Department with the ability to exempt those sites regulated under NR 180.13(2)(c) provides the Department with the ability to exempt those sites regulated under NR 180.13(2)(b)(4) as indicated above if we determine that the disposal of the dredge spoil will not result in environmental pollution. Under no circumstances, however, can disposal take place in wetlands, critical habitat areas, or areas where surface or groundwater pollution may occur.
Remember that except for that category of projects that are exempt from the jurisdiction of the solid waste program, all projects should be assumed to require solid waste approval and licensing and applicants would be notified accordingly. This is particularly important because of the relatively lengthy process involved in gaining solid waste approval. We should not be overly optimistic with applicants that exemptions or quick approval can be gained. To do so only continues to magnify the problems of crisis management. Only after review of specific information on a project, should a determination be made whether any waivers or exemptions are warranted.

The review procedure to be followed should insure that the District Water Management Coordinator and the District Solid Waste Coordinator discuss each dredging project application to determine whether the project is exempted by the administrative code. If it is not automatically exempted, the Solid Waste Coordinator should advise the Water Management Coordinator what information will be requested of the applicant to allow further review of the project.

**Special Considerations for Dredging Permits**

1. **In-Water Concerns**

   When a dredging project is underway, a variety of physical changes occur within the waterway itself. Since a dredging permit or contract must contain a finding that no adverse effects on water quality will result, we must consider how to minimize adverse effects within the waterway.

   Properly selected and operated dredging equipment and turbidity curtains can limit the amount of turbidity a dredging project generates. The hydraulic cutterhead dredge generates the least amount of turbidity. With a variable-speed cutterhead, a low speed must be used to remove loose or flocculent material, while a fast speed is needed to remove granular material or stiff clay. Mechanical dredging equipment generally increases turbidity substantially adjacent to the dredge.

   Turbidity curtains may be deployed to limit the amount of suspended material leaving the immediate vicinity of the dredge. One method is to surround the dredge itself by a turbidity curtain. The turbidity curtain should extend down to at least the depth of light penetration. White such curtains rarely contain all the suspended material, they can prevent transportation within the water column and confine material movement to a “mud flow” along the bottom. This limits any effects such material in the water column may have to the area inside the turbidity curtain. In streams, dredging should be timed to coincide with periods of normal or low flow when using turbidity curtains. Experience has shown that turbidity curtains have little value in a stream when the average velocity exceeds one foot per second. Without turbidity curtains, we may encourage dredging during a higher flow period to better dilute suspended materials and keep downstream effects to a minimum. Other means of controlling turbidity such as booms or cofferdams may be considered but their adverse effects may outweigh their usefulness.

   We should consider how dredging will reshape the contour of the bed of the waterway. The dredging should not leave an area containing substantial drop-offs. Drop-offs in an area near shore may constitute a safety hazard. The area should be left in a condition that minimizes the need for future maintenance dredging. When working in river estuaries, we should estimate the stream's sediment load to determine whether frequent maintenance dredging will be needed to maintain a specific depth.

2. **Dredged Material Disposal Concerns**

   A number of options exist for the disposal of dredged material. This discussion is divided into brief statements regarding various options.
1. On-land disposal: The encouragement of on-land disposal is the continuing and paramount Department policy for dredge material disposal. This policy has been recently reflected in Chapter NR 347, Wisconsin Administrative Code. In general, we encourage disposal of dredged material on land in a manner which allows the economic reuse of the material in ways which are environmentally acceptable. The use of other than on-land alternatives requires additional justification. This would include a discussion of need, available alternatives, feasibility, and likely environmental consequences. We should recall that navigable waters are held in trust for all the public and that an in-water disposal option should result in overall public benefit (or at least in no substantial harm).

2. Confined disposal facilities (CDF's): Confined disposal facilities have been approved by two different mechanisms in the past. First, where the facility has not been immediately adjacent to the existing shoreline, it has typically been approved by means of legislative lakebed grant. Alternatively, where the facility has been immediately adjacent to the shoreline and where other statutory criteria have been met, bulkhead lines in combination with submerged lands leases have been used to approve disposal facilities. Past practice has been to not authorize these facilities as structures under Section 30.12, because the ultimate use of the facility is typically a piece of land on which some type of development will occur. Approval of the creation of land is not appropriate under either Sections 30.12 or 30.11. The creation of land for specific purposes is permissible when a submerged lands lease under Section 24.39 is also involved.

It is expected that the Department will continue its past practice of approval of confined disposal facilities by either of the identified mechanisms in circumstances where it is environmentally acceptable and where the appropriate requirements are met.

3. Industrial port development and marina construction: Facilities of these types have been approved in the past using either Section 30.12, Section 30.11, or the combination of bulkhead line and submerged lands lease, as appropriate. We expect that past practice would continue into the future.

4. Beach nourishment: For the purpose of this discussion, "beach nourishment" means the addition of material to a beach to prevent or reduce erosion or to help replace material lost to erosion.

Beach nourishment may be approvable pursuant to the following strict criteria by using a bulkhead line alone or a combination of bulkhead line and submerged lands lease. First, there would have to be a demonstrated need for the beach nourishment project and the material would have to be chemically and physically suitable for such a nourishment project. Secondly, the material would have to be placed sufficiently close to shore to provide assurance that it would perform the beneficial function of "nourishing" the beach.

Material cannot be placed beyond that depth where a substantial majority of it can be expected to achieve "beach nourishment." Because of specific requirements in section 24.39, Wis. Stats., the area of the beach which is of public recreational value must be benefited. This may or may not be the same as the full extent of the beach as a landform. The depth limit will vary from site to site based on the material's physical characteristics, offshore contours, and wave and current patterns. No arbitrary maximum depth can be given; however, the closer into the shore the material is placed, the more likely the standards of sections 24.39 and 30.11 can be met.

Because of the variability and complexity of "beach nourishment" as a practice, we will ordinarily request the applicant or sponsor to provide an opinion by a recognized expert on the feasibility of the proposal. This opinion will be evaluated and its conclusions, if technically sound, will be used by the Department in reaching a decision on whether the proposal meets applicable standards.
Two demonstration projects of beach nourishment are being authorized to allow an empirical study on whether the above criteria can be met. The results of these demonstration projects will be used to reevaluate the acceptability of this alternative for dredged material disposal.

5. Island creation: In general, the creation of islands cannot be authorized by the Department under existing statutory restrictions. However, in limited circumstances, the combination of bulkhead line and submerged land lease would appear to have the flexibility to authorize islands without requiring additional legislation. The island would have to be quite close to the existing shoreline of the mainland although it would not be appropriate to circumscribe such an island with a bulkhead line when that bulkhead line would cross an area which supports significant navigation use. Also, riparian ownership issues and other criteria contained in Section 24.39(4) would have to be met before an island could be authorized in this matter.

While a submerged lands lease substantially modifies the usual conformance to the shoreline requirement of Section 30.11, it does not, in our judgment, totally eliminate it. Our view is that where the area circumscribed by the bulkhead line and the distance of that line from the shore becomes clearly out of proportion to the general configuration of the shoreline itself, the bulkhead line and lease combination would not be appropriate. While it is not possible to clearly define the point at which this would occur, proposals such as that at Interstate Island in the Duluth-Superior Harbor clearly stretch the flexibility of the bulkhead line-lease combination beyond its breaking point.

6. Filling of deep holes: Filling of deep holes could only be allowed by direct legislative authorization. A rare exception to this would be where the hold is so close to the shoreline that a bulkhead line (or bulkhead line and submerged lands lease) could conceivably be used to allow the filling to take place. In the more usual circumstances where the hold is some distance offshore, direct legislative authorization would be needed. The filling of deep holes would typically be preferable to deep water dumping. However, the Department would not support or take a neutral position on legislation to authorize deep hole filling unless it were clearly demonstrated that there was a need to do so, and that the adverse environmental consequences would be minimal.

7. Creation of wetlands: Creation of wetland areas along or immediately adjacent to the existing shoreline could possibly be authorized by use of a bulkhead line with or without an accompanying submerged lands lease. The feasibility of creating such a wetland and the need for that type of wetland habitat in the area would be key factors in judging whether authorization should be granted. If an offshore breakwater structure were needed to prevent erosion of the recently created wetland, it could be authorized under appropriate circumstances by Section 30.12 or could be included in a bulkhead line and submerged lands lease for the entire project. The dredged material may have to be confined by dikes or riprap to ensure its remaining in place long enough for vegetation to stabilize it.

8. Deep water dumping: We believe that deep water dumping is not allowable under existing statutory law. Therefore, direct legislative authorization would be necessary for such a disposal practice to occur. In order for the Department not to oppose such legislation, it would have to be demonstrated that deep water disposal was the only reasonable alternative available. Furthermore, the material itself could not be significantly polluted and could not be placed in an area where adverse environmental consequences could be expected to occur. This disposal technique should be looked at as the last resort and would not be used where any of the other alternatives discussed are judged to be reasonable.

Proposed dredging material disposal practices which have not been authorized routinely in the past (this would include beach nourishment, island creation, deep hole filling, wetland creation, and deep water dumping) should not be allowed to occur without a study demonstrating the need for the particular disposal practice, and property documenting pre- and post-project conditions and conditions during the operation so
that proper judgments of the environmental impacts of practice can be made. Furthermore, authorization should not occur where the project will not accomplish the desired goals or where serious environmental damage is expected, even though positive proof of that damage could not be provided at the outset.

Several considerations relating to desirable disposal site practices are discussed in the next paragraphs.

We must know the amount of material being removed from the bed of the waterway with a fair degree of accuracy to properly assess the proposed project. Furthermore, disposal area design, particularly in a hydraulic dredging project, is related to the volume of material to be removed. The degree of accuracy needed in estimating the quantity to be removed varies from project to project. The most detailed and accurate method involves using soundings on a grid pattern. Soundings will indicate water depths at the grid intersections. Where practical, soundings are made from the ice due to ease and accuracy of measurement. The volume of material to be removed is the summation of the average distance between existing and proposed elevations at the grid corners times the area of the grid. Many methods of calculating volumes are available, including the standard method of earthwork computation which involves taking successive cross-sections throughout the area to be dredged. The volume of material to be removed between the two adjacent cross-sections is the average of the two cross-sectional areas of material to be removed times the distance between them.

The upland disposal site should be within a reasonable distance (both horizontally and vertically) of the body of water where dredging is occurring. A long discharge pipeline and/or any lift required from the dredging site to the disposal site will decrease the normal efficiency of the dredging operation. If the lift becomes excessive or friction losses in the discharge pipeline become unusually high, booster pumps may be required. In some cases, the discharge pipeline may lead to a temporary dewatering area from which the dredged material will be hauled to the final disposal site. Care should be taken in selecting any such temporary dewatering area to ensure control of leachate and runoff.

The disposal site should be in a environmentally acceptable location. Preferably the site should have road accessibility to encourage reuse of material. The site must be in an area where any leachate resulting from spoil disposal will not contaminate groundwater. An ideal situation occurs where a natural impervious seat lines the bottom of the disposal site.

The inlet pipe to the disposal area should be equipped with baffles or with a 45° elbow to dissipate the energy of the inflow. If separation of several different spoil types is desired (coarse from fine, organic from mineral, usable from unusable), the cell(s) should be fitted with water in advance. Baffles or dikes may be used to prevent short-circuiting (movement of material directly to the outlet without adequate detention time).

The disposal site will typically consist of some type of cellular receiving area in which the suspended solids settle from the carriage water.

A multi-cellular design is better than a single-cell operation. The multiple cells allow considerable flexibility in operation and may enhance the opportunity for material reuse. By properly varying the detention times of the various cells and by placing these cells in a series, various sizes of material can settle out in different cells for reuse. A more common approach is for cells to be used in parallel operation (in other words, each cell is filled in turn while the material in other cells is settling out). This arrangement can be used to insure adequate detention time and removal of suspended solids throughout the dredging operation. With a single-cell operation, excessive capacity must be provided or else suspended solids concentrations will become too high in the discharge effluent since the cell will fill up relatively quickly and detention time will be reduced.

The typical effluent outflow structure from a confined disposal site is an overflow weir. In sandy areas, it may be possible to discharge the effluent directly on the ground where it can percolate with no return to the lake or
stream. In cases where a direct return is necessary, a satisfactory closed or open conduit must be provided. The location of the carriage water return discharge point should be selected carefully to avoid sensitive areas and to provide good dispersion of the effluent at the discharge point.

The effectiveness of the disposal site can be improved by incorporating certain waste treatment techniques. A sand filter may be used at the outlet to trap remaining suspended particles. Flocculating chemicals may be added to enhance settlement and limit the amount of suspended material leaving the site. In some cases, oxygen has been bubbled into the discharge pipeline to reduce the concentrations of heavy metals remaining in solution. Typically, there is enough iron in the water so that introducing oxygen produces a ferric hydroxide precipitate that effectively removes most heavy metals and suspended particles.

**Final Disposition**

The Reuter decision requires the Department to make a finding that a dredging project will not adversely affect water quality or increase water pollution. A finding should also be made that the proposed dredging project will not cause environmental pollution as defined in subsection 144.30(9), Wis. Stats. It is also clearly necessary that a finding be made that any contract is consistent with public rights and that any permit is consistent with the public interest in the water involved.

In the case of noncommercial dredging contracts, performance or surety bonds may be required. A performance or surety bond is required for commercial removal projects. The bonding requirement is found within Chapter NR 346, Wis. Adm. Code. The purpose of the bond is to insure that the work will be properly completed. If the contractor defaults or is otherwise unable to complete the project, sufficient money should be available from the bond for the Department to complete the work or restore the area to a satisfactory condition. in cases where the project is very small or where no undesirable effect will result from a partially completed project, a performance bond is not necessary. Where a bond is required, the amount of the bond should equal the estimated project cost or the cost of restoring the site. Program guidance is being developed.

Another general requirement of contract law is the "nondiscrimination clause." The Department, as a contracting agent, must include a nondiscrimination clause in any dredging contract. The required wording is found in s. 16.765(2), Wis. Stats.

Compensation is required for material removed under a dredging contract because the state as trustee, must receive reasonable payment for material removed (such compensation is not required where a municipality enters into a contract with the State and where the material will be used for public purpose and not for resale). The amount of compensation is computed according to Chapter NR 346, Wis. Adm. Code.

**Special Cases**

1. **Maintaining Dredging**

In cases where a dredging project must be repeated at regular intervals to maintain design dimensions we may issue a contract or permit which covers more than one removal operation. Since the law limits dredging contracts to a period of five years any successive maintenance dredging operations required for a project may be authorized for the five-year period in the contract. Because of the five year limit on contracts and constantly changing environmental concerns and possible changes in site conditions, we should not issue maintenance dredging permits for more than a five-year period. Any contract or permit should indicated that the Department retains jurisdiction to modify the dredging activity or to stop the work if undesirable effects occur.
2. "Treasure-hunting" or "Gold-dredge" Operations

For a number of years, "treasure-hunting" dredge operators have retrieved valuable objects from the beds of navigable waterways. The typical salvage operation takes place in areas of concentrated human activity such as public beaches, and consists of removing bed material, sorting out valuable objects, and redepositing the remaining bed material using a small portable "gold mining" suction dredge. See s. 27.012, Wis. Stats., for guidance on ownership of salvaged material.

In the strictest definition, such activities would constitute a dredging operation. However, past agency practices has been to not require formal permits for "treasure-hunting." Anyone interested in treasure hunting operations should be required to identify the area to be worked and secure an approval letter from the Department. Certain conditions such as requiring the person to remove hazardous and undesirable materials (broken glass, cans, etc.) may be included in the approval.

It is important that the bed material removed from the take not be redeposited in an environmentally sensitive area although this type of operation usually does not substantially recontour the lake or stream bed. Because these operations usually take place in beach areas, the material removed is usually sandy and will not travel far from the actual site. In some cases, we may require some type of turbidity screen or restrict operation to times when turbidity is not a serious concern.

3. Trench Crossings

The Department requires a dredging permit or contract where a utility line or pipeline will be placed in a trench beneath the bed of a stream or lake. Keep in mind that temporary deposits of dredged material below the ordinary high-water mark of a body of water are not allowed under s. 30.12, Wis. Stats., so dredged material must be removed from the waterway.

The major difficulty occurs in replacing the bed condition upon completion. Typical requirements trench with suitable material (generally sand or gravel) and establishing the same elevation on the backfilled trench as the surrounding take or stream bed. In some cases, concrete has been used as a backfill. One problem in using such nonerodable material is that it might become a high point on the stream bed. This in turn could lead to silt deposition upstream of the raised trench and stream bed scouring immediately downstream from it.

4. Utility Crossings

In general, public utilities, are authorized in s. 182.017, Wis. Stats., to place structures used to transmit heat, light, and power upon the bed of navigable water. The exemption contained in s.182.017, however, does not apply to dredging under s. 30.20. Consequently, placing a utility pipeline or cable directly on top of a stream or lake bed would not require a permit under s. 30.12 but placing the cable or pipeline below the stream or lake bed requires a dredging permit or contract if placement actually requires dredging.

In the case of most buried cables, vibratory plows are used and a minimal amount of material is actually displaced from the lake or stream bed. In these cases, the Department has not required permits. The applicant applies for authority on Form 3500-54, Waterway Cable Crossing, and permission is given provided reasonable precautions are taken to prevent erosion and siltation. This practice should continue in the future.

Another concern which has been raised is the possible disorienting affect on fish and wildlife caused by the magnetic field surrounding the buried electrical cable. White insufficient information is available to
prove such an effect and argue against buried cables, Department personnel should be aware of this possible problem.

**Permit Monitoring**

1. During the Dredging Operations
   
   A. In-water Effects: The most obvious effect during a dredging operation is the turbidity generated at the dredge. Additional turbidity may result from leaks in the discharge pipeline in hydraulic dredging projects or at the point where discharge effluent water is returned. Every reasonable effort should be made to minimize the amount of turbidity while the dredge is in operation. The higher the percentage of loosened material the dredge captures, the more efficient the dredging operation and the lower the amount of turbidity generated. If excessive turbidity is present the cutterhead of a hydraulic dredge may be operating at an improper speed. Any leaks in the discharge pipeline may cause turbidity. Such leaks should be corrected as they reduce operational efficiency and may cause turbidity. If a turbidity curtain is in use and excessive suspended material is observed outside the curtain, it may be necessary to lower the sides of the curtain or obtain a curtain with a greater depth. If a current is present, the curtain may balloon and rise to the surface. Using heavier anchor weights in the bottom of the curtain may help prevent this. However, it may also be necessary to cease dredging operations until the current has reduced to a workable level (generally around one foot per second).

   B. Characteristics of the disposal site: Disposal site operation should be checked periodically to insure that suspended solids are being properly removed. If a multi-cell arrangement is in use, the relative change in turbidity between successive cells may indicate the effectiveness of the operation. Also, samples of water at the outflow points could be taken and analyzed. A general check should also be made to determine whether the disposal operation is creating any nuisance conditions (odor or insect).

   If dredged material is being rehandled between the point of discharge and the ultimate disposal site, a check should be made to insure that material losses are not substantial at the rehandling point or in route to the final disposal site.

   C. Discharge effluent return: Characteristics of the discharge effluent should be checked periodically. The permit or contract should require sampling on a regular basis to insure conformance with water quality requirements. Visual inspection can be made of the discharge effluent as a rough check on removal of suspended material.

2. After Completion of Operations
   
   A. Checking Dimensions: Many permits and contracts require a map showing the configuration of the dredged area after project completion. We can make spot checks by taking random soundings and comparing them with the permit requirements and any map which has been submitted. It may be desirable to make such a spot check to insure that the map was developed properly.

   B. Restoration of the Disposal Site: We are concerned that disposal areas be revegetated or otherwise stabilized. A disposal site's ability to become revegetated depends on the chemical and physical composition of the dredged material. In many cases, toxic substances may be present that would inhibit or prevent vegetation from growing directly on the dredge spoil. In such cases, a layer of
topsoil should be placed over the dredge spoil after dewatering and settlement. This layer of topsoil can then be seeded with appropriate native vegetation or grasses for stabilization purposes.

Final contouring of the site for runoff control also should be considered to minimize the likelihood of additional leachate from the dredged material. Future uses of the area should be consistent with the dredged material's capabilities to resist erosion, provide foundation support, and develop a vegetation cover.

When the removal and reuse of dredged material is anticipated over an extended time period, the permittee should be required to take steps to prevent erosion, noise and dust, and to provide a visual screen from surrounding areas.

References

Comments on the Flow Chart

A. Additional screening of projects: Each project needs to be screened to determine which statutory approvals are needed in addition to a s. 30.20 permit or contract. These additional items are:

1. Is the project exempt from solid waste licensing (meets criteria under MR 180.13(2)(b)4)? If exempt, MR 347.08 does not apply.

2. Does the project contain a treatment facility? If not, NR 347.11 does not apply (we may want groundwater data but will not need the other items specified in 347.11).

3. Does the project meet the criteria for a general WPDES permit? If so, NR 347.09 does not apply.

B. Description of "Cases" I through VIII

The flow chart illustrates the two "special" types of dredging projects whose informational requirements are likely to be predictable in advance.

1. Projects involving toxic and hazardous substances or PCB's: Except for the limited exemption allowed if the dredging is mechanical, it is likely that the full range of other information spelled out in NR 347 will be required.

2. Mechanical dredging of under 3000 cubic yards of uncontaminated sediment: limited data will be required here. Additional information could be requested when we suspect a problem or if there will be a treatment facility and/or an individual WPDES permit is required. The intent is to only request such additional information when we expect to be unable to make a finding that the project will not cause environmental pollution.

The other possible combinations of information needs are dependent on a variety of factors and cannot be spelled out so briefly. The eight variations are described in Table I below. In all cases, NR 347.09, and 347.11 may or may not apply, depending on the specific facts.
### Table I
NR 347 Informational Requirements

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<tr>
<th>Case</th>
<th>Preliminary Information (347.05(2))</th>
<th>Additional Information per NR 347.05(4)</th>
<th>Exemption per NR 347.05(5)(a)</th>
<th>NR 347.08</th>
<th>NR 347.09</th>
<th>NR 347.11</th>
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*Require sediment sampling/analysis if contaminated sediments are known or suspected to be involved.

[Table 2 appears here, Summary of the potential environmental effects of dredging and dredged material disposal and their causes, and the major factors contributing to the severity of the effects]
CORRESPONDENCE/ MEMORANDUM

STATE OF WISCONSIN

DATE: January 2, 1981

TO: District Directors

FROM: George E. Meyer

SUBJECT: Chapter NR 345, Wisconsin Administrative Code, Program Guidance

The following comments, arranged according to the sections of Chapter NR 345, Wis. Adm. Code, are intended to assist District personnel in implementing that rule by providing direction and details for staff use. They do not constitute standards or mandatory procedures because they are not a part of the rule.

1. Purpose (NR 345.01)

The purpose of the rule is to establish procedures for dredging permit (not contract) application processing and for emergency dredging plan approval either before or after the emergency arises.

2. Applicability (NR 345.02)

The rule applies to all dredging projects for which permits are required or for which emergency dredging plan approval may be obtained. The plan approval procedure will be somewhat different from that followed in processing permits. The emergency dredging plan approval process applies only to ditches draining agricultural lands which are currently being used for crop production.

3. Definitions (NR 345.03)

The following is intended to provide additional information and direction for staff to use in administering NR 345.

A. "Bed materials" means all earth, muck, sands and gravels, clays, marl, stones and boulders lying below the ordinary high water mark. (The full definition is found in Section NR 346.03(2), Wis. Adm. Code).

B. "Currently used for crop production" means the land has a cultivated crop which has been planted, is growing, or is being harvested.

C. "Drainage ditch" means a waterway of regular alignment, cross-section and bottom slope which was created or modified to provide more effective drainage of land than is allowed by natural surface and ground water drainage features.

D. "Emergency" means a condition created by an unexpected, sudden occurrence which threatens the growth or harvest of a crop, and does not include situations resulting from gradual changes in drainage efficiency. As an example, a major accumulation of silt after a flood event would create an emergency while the growth of vegetation, which occurs gradually, would not.

E. "Waterway" includes all streams and ditches with defined bed and banks, and a flow (the flow need not be permanent, however, it should continue for some period after direct surface runoff from an individual storm has ceased). Navigability is not a requirement nor does it matter whether or not the waterway is artificial.
4. Procedure (NR 345.05)

A. Routine (non-emergency) dredging

1) Navigable Waters - Standard application required
   a) Maintenance dredging and utility trench crossings: The investigation must be
      properly documented by Form 3500-23. The permit may be granted or denied
      immediately since no assessment (form 1600-1) is required. A short form (self-
      carbon) for grant or denial will be developed soon. Until then, the long form will be
      used.
   b) Other dredging: Form 3500-23 will be used to document the investigation. The
      permit cannot be granted or denied immediately because an environmental
      assessment (form 1600-1) is required. A short form (self-carbon) for grant or denial
      will be developed soon. Until then, the long form will be used.

2) Nonnavigable Waters - The standard application will be used until another form is
   developed. The minimum amount of information to describe the project is that specified
   in NR 345.06(l) for "pre-approval" of emergency dredging plans. A short form (self-
   carbon) for permit grant or denial will be developed soon. Until then, the long form will
   have to be used. The permit can be granted or denied immediately unless the project
   involves draining or filling of wetlands (in that case, an environmental assessment is
   required and the permit cannot be granted or denied until the assessment process is
   complete.) Form 3500-23 will be used to document the investigation.

B. Emergency Dredging - Only applies to "sudden natural closures of drainage ditches draining
   agricultural lands currently used for crop production." This would always be maintenance
   dredging required to restore a pre-existing drainage ditch capability and would never involve
   the digging of new drainage ditches or the enlargement of existing drainage ditches beyond
   their pre-existing capacity.

1) Pre-approval of plans - Plans will be submitted clearly showing the information specified
   in NR 345.06(l). These plans along with the completed standard application form (minus
   attachments), will be considered a complete application. The approval or disapproval of
   plans will be a permit (or denial) using a short form (self-carbon). The standard form
   may be used until the short form is available. An environmental assessment (Form 1600-
   1) is not required. The investigation should be documented by Form 3500-23. The
   approval should contain a condition that the Department must be notified before
   dredging is completed.

2) "After the fact" approval - The applicant must contact the Department before dredging.
   The WMS or WMC should ask enough questions to be reasonably assured that there is a
   legitimate emergency. The conversation should be fully documented. If there is doubt
   about the "emergency," an immediate inspection should be made.

   The actual approval should be considered an after-the-fact approval of the previous dredging
   and a pre-approval of future emergency dredging and should be handled procedurally the same as
   pre-approval of plans.
C. Further Considerations

1) Wetlands - If a proposed dredging project will adversely affect a wetland, the permit may be denied immediately but should not be issued immediately. Decisions which involve adverse wetland impacts must be fully documented.

2) Scope of dredging projects - To be considered a maintenance dredging project (either "routine" or "emergency"), a proposal is limited to reestablishing the original dimensions of the waterway. An increase in width or depth would be considered new dredging.

3) Emergencies - If an inspector determines that "emergency dredging" is proceeding under non-emergency conditions (not due to a sudden closure of a ditch draining agricultural lands currently used for crop production), the inspector should advise the contractor and landowner to cease dredging. Appropriate enforcement action should be considered. If an application is submitted, it will be treated as a request for non-emergency dredging authorization.

5. Standards for grant or denial

Standards applied in implementing this rule are found in s. 30.20(2)(c), Statutes. The Department may issue permits or approvals when consistent with the public interest in the water involved. When a wetland will be adversely affected, the decision must be made consistent with s. NR 1.95, Wisconsin Administration Code. In applying NR 1.95, staff must recognize that the rule requires professional judgment based on the availability of reasonable alternatives and the value of the wetland. If it is reasonable to do so, actions adversely affecting wetlands are to be avoided. Denial of requested authority is an alternative which must be considered, particularly where substantial adverse effects on wetlands would result if a permit were granted. If avoidance is not reasonable, adverse impacts are to be minimized. Ordinarily, maintenance of existing agricultural ditches in shoreland areas will be authorized, consistent with the intent of NR 115.

All types of authority should specify devices or techniques which will be used to prevent downstream sedimentation and turbidity. These might include sumps, silt screens, straw bale filters, or requiring dredging in the downstream direction. Long term provisions could include sloping back the ditch banks, grading material berms to within one foot of the natural ground level with a slope away from the ditch, providing a sodded area one rod wide on each side of the ditch, revegetation and maintenance of grassy vegetation on the ditch banks and berms, and keeping trees and brush off of the ditch banks, berms and buffer strips.

Questions on the implementation of NR 345 should be addressed to Bob Roden at (608)266-8034.

cc: R. Roden - WRZ/5
J. Kurtz - LEG/5
R. Knitter - WRZ/5
POSITION STATEMENT ON NR 345 (Dwyer Rules) IMPLEMENTATION

1. Q. What ditches are now under Department jurisdiction?

   A. With the publication of NR 345 on August 1, 1980, all ditches with defined bed and banks, and a flow come under the permit requirements of Section 30.20, Statutes. The flow need not be permanent (i.e. intermittent ditches are considered to have a flow). However, it should continue for some period after direct surface runoff from an individual storm has ceased. Navigability is not an issue nor does it matter whether or not the ditch is entirely artificial. Removal of bed material from any such ditch requires a permit from the Department.

2. Q. Where do we take jurisdiction, what standards are used to grant or deny permits?

   A. The specific standards are found in s. 30.20(2)(c), Statutes. The Department may issue permits when consistent with the public interest in the water involved. When a wetland will be adversely affected, the decision must be made consistent with s. NR 1.95, Wisconsin Administrative Code. In applying NR 1.95, staff must recognize that the rule requires professional judgment based on the availability of reasonable alternatives and the value of the wetlands. If it is reasonable to do so, actions adversely affecting wetlands are to be avoided. Denial of requested authority is an alternative which must be considered, particularly where substantial adverse affects on wetlands would result if a permit were granted. If avoidance is not reasonable, adverse impacts are to be minimized by careful design and construction practices. Staff should be guided by Chapter NR 115 when considering the authorization of maintenance of existing agricultural ditches in shoreland areas. Ordinarily, such authorization will be granted, consistent with the intent of NR 115.
Permit No. WI-0055573-1

General Permit Regulating Wastewater Discharges Under
the Wisconsin Pollutant Discharge Elimination System

In accordance with Chapter 147, Wisconsin Statutes and the effluent limitations, monitoring requirements and other conditions contained in this permit, any
dredging operation

located in the State of Wisconsin having wastewater discharges meeting the applicability criteria listed in Part I is permitted to discharge these wastewaters to
groundwaters of the state indirectly via land surface seepage or absorption systems only.

This permit shall become effective on the date of signature and shall expire on September 30, 1986.

L. F. Wible, P.E.
Administrator
Division of Environmental Standards
Dated April 26, 1982
Part I.

A. Applicability Criteria

All discharges from any facility subject to this permit shall meet all applicability criteria listed below. Persons wishing to discharge to waters of the state wastewaters not meeting all of these applicability requirements shall either meet the applicability requirements of another general permit or shall apply for and receive an individual WPDES permit under Chapter 147, Statutes.

1. This permit is applicable to discharges from dredging of uncontaminated sediments, or mildly polluted sediments not requiring specialized environmental controls, where carriage water and interstitial water is disposed of via indirect seepage to groundwater, with no direct discharge or return flow to surface waters.

2. Dredging operations shall be performed in accordance with Chapter NR 347, Wis. Admin. Code, "Regulation of Dredging Projects".

3. Wastewater disposal facilities shall have sufficient capacity to contain the wastewater discharge and any precipitation which falls within or flows into the area of the disposal system.

4. Accumulated solids shall be managed or removed to maintain the hydraulic capacity and absorptive capability of the disposal system.

5. Where disposal facilities are contained by dikes or berms, no above ground leakage is allowed on the outer surface of such dikes or berms.

6. No hazardous waste or toxic substances shall be present in the wastewater stream.

7. Any work performed below, or within 500 feet of the ordinary high water mark of navigable waters, in wetland areas, or within areas subject to local floodplain and shoreland regulations, must conform to all such county or local ordinances. Also, all applicable state permits and/or contracts required by Chapters 30, 31, and 87, Stats. (or Wisconsin Administrative Codes adopted under these laws), and federal permits must be obtained as necessary.

B. Monitoring and Reporting

1. No monitoring of these discharges is required.

2. Although no routine monitoring or reporting is required for discharges covered by this permit, there may be instances when special reporting may be required by the applicability criteria listed above, or by the general conditions contained in Part II. Such reports would be due, for example, if a change in the discharge were anticipated. These reports shall be submitted to:

   Wisconsin Department of Natural Resources
   WPDES Permit Section
   P.O. Box 7921
   Madison, Wisconsin 53707
3. Reports required by this permit shall be signed.

(a) for a corporation by a principal executive officer of at least the level of Vice President of his duly authorized representative having overall responsibility for the operation of the facility for which this permit is issued,

(b) for a partnership by a general partner, and

(c) for a sole proprietorship by the proprietor.
Part II.
GENERAL CONDITIONS

1. **Compliance**
   All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at level in excess of that authorized shall constitute a violation of the permit.

2. **Adverse Impact**
   The permittee shall take all reasonable steps to minimize any adverse impact on waters of the State resulting from noncompliance with any effluent limitations specified in this permit, including such special or additional monitoring as may be requested by the Department or may be necessary to determine the nature and impact of the noncomplying discharge.

3. **Removed Substances**
   Solids, sludges, filter backwash or other pollutants removed from or resulting from treatment or control of wastewaters or intake waters shall be stored and disposed of in a manner such as to prevent any pollutant from such materials from entering the waters of the State. Land disposal of treatment plant solids and sludges shall be either at a site or operation Licensed by the Department under Chapter NR 180, Wisconsin Administrative Code, or in accordance with a sludge disposal plan approved by the Department.

4. **Right of Entry**
   The permittee shall allow authorized representatives of the Department of Natural Resources, and the Administrator of the United States Environmental Protection Agency or his authorized representatives, upon the presentation of credentials:
   a. To enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and
   b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any wastewaters.

5. **Voluntary Withdrawal**
   After notice and opportunity for a hearing, as provided in Section 147.03, Wisconsin Statutes, the Department may withdraw the point source from coverage by this permit and issue a separate permit for that source.

6. **Withdrawal**
   After notice and opportunity for a hearing, as provided in Section 147.03, Wisconsin Statutes, the Department may withdraw a point source from coverage of this permit and issue a separate permit for that source if:
   a. The point source is a significant contributor of pollution;
   b. The point source is not in compliance with the terms and conditions and applicability requirements of this permit;
c. A change occurs in the availability of demonstrated technology or practices for the control or abatement of pollutants from the point source;

d. Effluent limitations or standards are promulgated for the point source;

e. A water quality management plan containing requirements applicable to the point source is approved.

7. **Toxic Pollutants**
Nothing in this permit shall be construed to authorize the discharge of any toxic pollutant or combination of pollutants in amounts or concentrations which exceed any applicable toxic effluent standard or prohibition, including any schedule of compliance specified in any such effluent standard or prohibition, promulgated under Section 147.07(1), Wisconsin Statutes.

If an applicable toxic effluent standard or prohibition, including any schedule of compliance specified in such effluent standard or prohibition, is promulgated under Section 147.07(1), Wisconsin Statutes, for a toxic pollutant or combination of pollutants which is present in the discharge, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition.

8. **Civil and Criminal Liability**
Except as provided in permit conditions on "Bypassing" (Part 11, 16) and "Power Failures" (Part 11, 17), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties under Section 147.21, Wisconsin Statutes, for noncompliance with the terms and conditions of this permit.

9. **State Laws**
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other applicable State law or regulation.

10. **Property Rights**
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

11. **Severability**
The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected hereby.

12. **Confidential Information**
Except for data determined to be confidential under Section 147.08(2)(c), Wisconsin Statutes, all monitoring reports required by this permit shall be available for public inspection at the headquarters of the Department of Natural Resources. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 147.21, Wisconsin Statutes.

13. **Change in Discharge**
Any anticipated facility expansions, production increases or process modifications which will result in new, different or increased discharges of pollutants which will result in the permittee no longer complying with all terms, conditions and limitations of this permit shall be reported to the Department at least 180 days before such expansions, production increases or process modifications occur.
14. **Noncompliance Notification**
If, for any reason, the permittee does not comply with or will be unable to comply with any condition or requirement of this permit, he shall provide the Department of Natural Resources in writing within five (5) days of becoming aware of such condition, with the following information.

a. A description of the cause of the noncompliance; and

b. An identification of the period of noncompliance, including exact dates and times; or, if continuing, the anticipated time the noncompliance is expected to continue, and a description of the steps being taken to reduce, eliminate and prevent recurrence of the noncompliance.

15. **Facilities Operation**
The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

16. **Bypassing**
The diversion or bypass of any discharge at a treatment works or land disposal system to a surface water of the state is prohibited. In the event of a bypass the permittee shall immediately notify the Department District Office by telephone. In addition, the permittee shall notify the Department of Natural Resources, WPDES Permit Section of each diversion or bypass by Letter, within 72 hours.

17. **Power Failures**
In order to maintain compliance with any condition or requirement of this permit in the event of the reduction, loss, or failure of one or more of the primary sources of power to the wastewater control facilities, the permittee shall either:

a. Provide an alternative power source sufficient to operate the wastewater treatment or control facility.

b. Reduce or otherwise control production and/or all discharges from the facility.

18. **Spill Reporting**
In the event that a spill or accidental release of any material or substance results in the discharge of pollutants from this facility at a rate or concentration greater than that which is Limited by this permit, the permittee shall notify the Department by telephone at 608/266-3232. At the time of notification, the following information shall be presented:

a. The name and location of facility and its WPDES Permit number;

b. The name of the material which was spilled and a list of its chemical constituents;

c. The estimated time the spill commenced and has or will be stopped;

d. The name of the receiving water in which the spill occurred or could occur;

e. The name, title and telephone number of the persons making the notification.

Notification made in accordance with this section does not relieve the permittee of any other noncompliance notification requirements contained in this permit or in Section 311 of the Federal Water Pollution Control Act (P.O. 92-500), as amended by the Clean Water Act of 1977 (P.L. 95-217).
Several questions regarding the interpretation of NR 347 have recently arisen. One problem centered around the need for extensive data from applicants for projects in "environmentally sensitive areas." Since this phrase is defined in NR 347 in a broad way, concern was expressed that virtually all projects would require extensive amounts of data before a permit could be issued.

As second problem involves a missing reference in NR 347 and in the flow chart found in figure 1, Chapter 120 of the Water Regulation Handbook.

"Environmentally sensitive area" is defined in NR 347.03(10) as "an area which may be especially susceptible to damage by dredging or the disposal, rehandling or treatment of dredged materials, including, but not limited to: areas within 1,000 feet of a navigable lake, pond or flowage; areas within 300 areas; areas where the department finds that there is a reasonable probability that disposal, rehandling or treatment within such area will have a detrimental effect on surface of groundwater; and areas within 1200 feet of a public or private water supply." We interpret this definition to mean that a proposed disposal site in the floodplain, for example, should be closely examined to determine if the proposed disposal site is "especially susceptible to damage by dredging…." If it appears upon investigation that the site is not especially susceptible to damage, the stringent data requirements normally required for "environmentally susceptible areas" may be waived. The same logic applies to wetland areas, critical habitat areas, etc. The definition should not be interpreted to mean all the areas named are automatically "environmentally susceptible areas" requiring extensive data.

Minimum data requirements for dredging projects are therefore:

1. Projects under 3000 yd$^3$ of material, disposal in areas not "environmentally sensitive," involving no toxic or hazardous waste:
   a. Preliminary information required from NR 347.05(2) a-d
   b. Disposal site information from NR 347.08 required.
   c. Treatment facility information specified in NR 347.11 (may not be applicable).
   d. Discharge permit information under NR 347.09 (may not be applicable).
2. Projects over 3000 yd$^3$ of material, disposal in areas not "environmentally sensitive," involving no toxic or hazardous waste:

a. Preliminary information required from NR 347.05(2) a-d.

b. At least once core sample is required pursuant to NR 347.07(2)(a)(2). More samples may be required.

c. Analysis of the samples is required pursuant to NR 347.07(3).

d. Treatment facility information specified in NR 347.11 (may not be applicable).

e. Discharge permit information under NR 347.09 (may not be applicable).

There is a typographical error in figure 1, Chapter 120 of the handbook. The second box in the upper left portion of the figure, which reads "Require preliminary information in NR 347.05(2)(e) - (d)" should read "Require preliminary information in NR 347.05(2)(a) - (d)". Also note that Table 1 of Chapter 120 implies that for certain projects no sampling is required. If the project is over 3000 yd$^3$, at least one sample will be required pursuant to NR 347.07(2)(a)(2).

NR 347.05(4)(a) contains a reference to NR 347.04(4)(a), which does not exist. The code will be amended later this year to correct this problem (among other). Until that time ignore the reference to a list of waters but not the rest of the subsection.

Reviewed By: Daniel Holzman   WZ/5
Scott Hausmann - WZ/5
Ed Brick   WZ 5
Bob Roden   WZ/5
CORRESPONDENCE/ MEMORANDUM

DATE: June 9, 1983
FILE REF: 3500 (WMC)

TO: Greg Pilarski,
Southeast District Dredging Coordinator

PMMS Response
Put in: Ch 120, W.R. Handbook

FROM: Robert W. Roden, DTC Chair

Distribution: SED, LMD, NWD, IWW, SW

SUBJECT: Milwaukee Harbor Non-Federal Dredging Projects

You have asked for guidance on the following questions related to Milwaukee Harbor Dredging Projects:

1. Requirements for a WPDES permit for the Milwaukee Confined Disposal Facility (CDF);
2. Control of the use of the Milwaukee CDF and our opportunity to influence use;
3. Application of Chapters NR 180 and 181 to the disposal of dredged materials; and
4. Department jurisdiction under Ch. 30 over Milwaukee Harbor non-federal dredging activities.

WPDES Permit Requirement

Ken Wiesner and others in the Industrial Wastewater Section said that a discharge permit is required for the Milwaukee CDF. Detroit District Corps of Engineers representatives indicated agreement with that opinion during a discussion of the 1983 maintenance dredging program on January 5, 1983. An application has been received and is being processed. Carl Blabaum has decided that the application will be processed in a normal manner.

Control of CDF Use

At the January 5, meeting, control of CDF use was discussed. Corps representatives said that the federal authority for CDF construction included a requirement that capacity be provided within the CDF for contract dredgers. Control by the Corps of Engineer is through their Section 10 dredging permit program. They also charge a fee per cubic yard for the placement of material in the CDF. We believe we have an opportunity to participate in those decisions through our review of and comment on Section 10 permit application notices and through the water quality certification process (the Corps has not agreed that 401 certification necessarily gives us that level of input). The Corps of Engineers indicated that they were not interested in having toxic and hazardous wastes disposed of in the Milwaukee CDF.

One further point regarding a use by contract dredgers of the Milwaukee CDF is appropriate. The Corps authority states that the dredged materials can be placed in the CDF from the Milwaukee Harbor and
vicinity. They have not defined the limits of the Milwaukee Harbor "vicinity." You recall in the past that materials dredged from the Port Washington Harbor were placed in the Milwaukee CDF.

**Solid and Hazardous Waste Requirements**

We discussed the applicability of Chapter NR 180 and 181 with Dennis Sopcich of the Residuals Management Section. Subject to the six constraints listed in the D. Sopcich memo to P. Didier of 2/25/83, the Bureau of Solid Waste Management has stated that exemptions from NR 180 requirements can be granted on a case-by-case basis for disposal of moderately to heavily polluted, non-hazardous dredged material in CDFS. Those constraints are:

1. Confined disposal facilities were developed by a Congressional directive. The intent of that directive was to prohibit open water disposal of sediment classified as moderately or heavily polluted. As Wisconsin prohibits open water disposal of any material (nonpolluted or otherwise), the Corps of Engineers must also use CDF's for nonpolluted sediments or seek upland sites.

2. The Industrial Wastewater WPDES permit system provides the Department with the ability of requiring the applicant to comply with certain discharge limits. This minimizes the potential for contributing to elevated background surface water concentrations.

3. Disposal within confined disposal facilities should be limited to nonhazardous sediment. Sediment analyses and the elutriate results are submitted with each maintenance dredge submittal thus providing information necessary to make this determination.

4. Sediment disposal within a confined disposal facility should be limited to sediment taken proximate to the confined disposal facility. This would ensure that sediment going to the subject confined disposal facility possesses physical and chemical characteristics indigenous to that area. This sediment would have already migrated throughout the area as a result of being dispersed by wave action and to a lesser degree shipping traffic. This should minimize any potential for added or new environmental impact as the Corps of Engineers will not be introducing any waste foreign to the area. Granted constituents contained therein will be resuspended in the carriage water, however, WPDES design constraints and subsequent discharge limits should minimize impact to the receiving water body.

5. Vertical leaching of constituents sorbed to the sediments or present in solution as part of the pore water will not be any greater than one would expect previous to its removal. Water levels are in a constant state of flux making the constituents sorbed to the sediment mobile at any time.

   It could end up that the sediments will be placed above the high-water marker and thus will be less subject to leaching once in the confined disposal facility versus in its natural state.

6. The confined disposal facilities proposed for use are already in-place and subsequently will not present further impact, via construction, to the surrounding environment.

   Dennis asked about the testing procedure used for sediment analysis. He has designed a "paper test" based on the actual USEPA toxic extraction procedure (TEP), to approximate the concentration which could occur if all of the constituents of concern were to go into solution. If the material appears hazardous using this mechanism, then the applicant should be requested to perform the actual TEP test. The USEPA tests provide official guidance for sediment analysis.

**Applicability of Ch. 30**
Subject to the exemptions in secs. 30.05 and 30.19, Stats., Chapter 30, Stats., applies to Milwaukee Harbor non-federal projects.

Reviewed By:
E. M. Brick
K. Wiesner
D. Sopcich
M. Cain

BR:EB:sm
cc: District Directors - WMCS
    Mike Cain - LE/5
    Dredging Technical Committee
DATE:       June 2, 1986

TO:          District Directors

(Water Mgt. Coor.)

PMMS Response Insertion: Chapter 3, Floodplain-Shoreland Guidebook and Chapter 120, Water Regulation Handbook

FROM:        Robert W. Roden

Distribution: All Water Regulation & Zoning Staff

SUBJECT:     Floodplain Zoning Ordinance and Amendment Approvals

Now that Chapter NR 116 has been revised and officially took effect March 1, 1986, we have revised the approval forms for floodplain ordinances and amendments to address some of the changes to the rule. These approvals will note that the rule has changed and where appropriate, alert the community that if they have a dam or dams, the zoning map may not accurately designate floodplains below the dam. We'll be approving the ordinance or amendment, but we may include some conditions depending on the specific ordinance or community involved. Examples of letters to be used for approvals are enclosed.

I. District Approval of Amendments

For minor map or text amendments submitted for DNR approval, district floodplain staff should use Glossary 4167(C) attached to approve just the amendment. A notice is included stating Chapter NR 116 has been revised and the remainder of the ordinance may not comply with the revisions. We approved these ordinances in the past and your action now will only approve the amendment. The community is not bound by a condition to upgrade their ordinance by this action.

Pre-1978 ordinances will require upgrading. Others may also require upgrading and conditions to do so. Contact the Bureau staff for guidance as these occur. See Glossary 4167(B) for example.

II. Bureau Approval of Ordinances

For new ordinances and ordinances adopted in the past but never approved, Lynn Goldade issues approvals from the Bureau and will determine which conditions must be included which will generally follow these guidelines.

A. Approval of Flood Studies Without Dam Analyses

One reason for conditions is that s. NR 116.08(1) requires that where flood studies are complete, areas downstream of dams must be mapped and zoned according to the hazard potential below the dam. We won't require that studies substantially completed by March 1 be revised. For studies just beginning and future studies, we are discussing dam analysis requirements with the Federal Emergency Management Agency. Consequently, for the next few months we will approve ordinances and amendments that adopt studies without dam analyses. These approvals will point out that additional analyses will be needed to accurately zone areas below dams. We will approve these adoptions and
provide notice that after an analysis is completed for the dams the community will have 6 months to adopt the analysis and zone accordingly. This approval will not begin the 10-year time frame for Chapter NR 333 compliance. We have not yet determined when or who will do the studies.

B. Approval of Ordinances Without Studies

For FEMAs Special Conversions or other adoptions not based on a study, s. NR 116.08(2) allows other information to be used for zoning. These ordinance approvals won't require the conditions concerning dams; however the approval will advise the community of the dam zoning requirements. Other conditions may be necessary depending on the content of each ordinance as compared to the revised Ch. NR 116.

III. Approval Orders (explanation of attachments)

Districts should use the attached form Glossary 4167(C) for all Floodplain Zoning Ordinance Amendment approvals issued after March 1, 1986. Approval orders issued by the Bureau will more specifically address changes to NR 116 and copies are attached for your information (Glossary 4167(o) and 4167(B)).

Glossary 4167(o) will be used for ordinances which comply with the revised rule, but dam analyses have not been completed. This alerts the community that in the future if an analysis is completed they will have 6 months to adopt the analysis and zone accordingly. Glossary 4167(B) will be used if older ordinances are submitted for approval which don't comply with all of the provisions of Chapter NR 116. This order gives the community 6 months to upgrade their ordinance based on s. NR 116.05(4) "Ugrading Ordinances". We don't expect many of these once the revised rule has been in effect a while and communities receive current model ordinances for examples.

Reviewed By:
  Lynn Z. Goldade
  Larry A. Larson
  Robert W. Watson
  Scott Hausmann
  Mark A. Riebau
  Richard Knitter
  Tom Steidl
FINDINGS OF FACT

1. On (8) _______ the (9) (Co./City/Village of) ________________ adopted (10) (Map and/or Text) amendments to the Floodplain Zoning Ordinance by Ordinance number(s) (11) __________ following public notice and hearing.

2. The purpose of this amendment is to (12) ____________________.

3. The Department has reviewed this amendment for compliance with minimum standards for floodplain zoning contained in Chapter NR 116, Wisconsin Administrative Code.

CONCLUSIONS OF LAW

1. The Department is authorized by s. 87.30, Wis. Stats., and ss. NR 116.21 and NR 116.22, Wis. Adm. Code to review and approve amendments to floodplain zoning ordinances.

2. The (13) (Co./City/Village) ______ has complied with the procedural requirements for adoption of this amendment according to Wisconsin Statutes.

3. This amendment complies with the requirements of Ch. NR 116, Wis. Adm. Code.
DECISION
The Department approves this amendment.

NOTICE OF APPEAL RIGHTS
Any person aggrieved by this decision who meets the requirements of s. 227.42, Stats., as renumbered by 1985 Wisconsin Act 182, may seek a contested case hearing by serving a petition for hearing on the Secretary of the Department of Natural Resources within 30 days after this decision is mailed by the Department.

Any person aggrieved by this decision may seek judicial review by serving and filing a petition for judicial review in accordance with the provisions of ss. 227.52 and 227.53, Stats., as renumbered by 1985 Wisconsin Act 182, within 30 days after this decision is mailed by the Department. Any petition for judicial review of this decision shall name the Department of Natural Resources as the respondent.

This notice is provided pursuant to s. 227.48(2), Stats., as renumbered by 1985 Wisconsin Act 182 and should not be construed as an indication that the Department believes that any person has a right to appeal this decision.

Please note that only the specific amendments listed are approved by this action. The remainder of the Floodplain Zoning Ordinance may not comply with all provisions of the revised Chapter NR 116, Wis. Adm. Code, which became effective March 1, 1986.

Successful floodplain management and implementation of these regulations will depend on effective administration and enforcement of the ordinance. Please keep us advised of any problems associated with this administration and let us know when we can be of assistance. (14) (Floodplain Specialist) _____ of the (15) _______________ District office at (16) _______________ is available to assist you with technical or administrative problems.

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For the Secretary

By _______________ Date _______________
Robert W. Roden, Director
Bureau of Water Regulation & Zoning

cc: (17) _______________ - (18) _______________ District Office
   Alan Biman -FEMA, Chicago
   Zoning Administrator
   Regional Planning Commission
BEFORE THE
DEPARTMENT OF NATURAL RESOURCES

Approval of Floodplain Zoning Ordinance
(1) (City/Co./Village of) ___________________ Approval No. 3-F-(2) ________________

FINDINGS OF FACT

1. On (3) __________________ the (4) __________________ adopted a Floodplain Zoning Ordinance following public notice and hearing.

2. The Department has reviewed this ordinance for compliance with minimum standards for floodplain zoning contained in Chapter NR 116, Wisconsin Administrative Code.

3. The Floodplain Zoning Ordinance is not consistent with the provisions of the revised Ch. WR 116, Wis. Adm. Code, which became effective March 1, 1986, in the following respect(s):

   Section NR 116.08 requires zoning of areas downstream of dams based on the ability of the dam to survive the regional flood. This community has areas which are not currently mapped as floodplains based on the hazard potential of a dam or dam(s) which affect the community. The dam or dams have not been analyzed or inspected for their hazard potential.

CONCLUSIONS OF LAW

1. The Department is authorized by s. 87.30, Wis. Stats., and ss. NR 116.21 and 116.22, Wis. Adm. Code to review and approve floodplain zoning ordinances and amendments.

2. The (5) (Co./City/Village) has complied with the procedural requirements for adoption of this ordinance according to Wisconsin Statutes.

3. This ordinance substantially complies with the requirements of Ch. NR 116, Wis. Adm. Code subject to the conditions of this Approval.

4. The conditions of approval set forth below are necessary to ensure compliance with Ch. NR 116, Wis. Adm. Code.

DECISION

The Department approves the amendment subject to the following conditions:

1. When an analysis is completed for dams affecting the community, changes to the zoning of downstream areas must be adopted within 6 months.

2. There shall be continuous and effective administration and enforcement of this ordinance.

3. Copies of all notices of and decisions on all amendments, special exceptions or conditional uses, and variances affecting floodplain zoning, shall be mailed to the (6) _______________ District office of the
Department and all amendments must be reviewed and approved by the Department before they become effective.

4. The (7) (Co./City/Village) __________________ shall amend the ordinance within six (6) months of the receipt of upgraded flood data, changes in State standards, or to reflect legal precedents or improved technical information and methods.

5. The (8) (Co./City/Village) __________________ shall amend the ordinance within six (6) months after receipt of any flood data that becomes available to regulate the floodplains of streams presently not delineated on the floodplain zoning map; or those streams that may come under future jurisdiction.

NOTICE OF APPEAL RIGHTS

Any person aggrieved by this decision who meets the requirements of s. 227.42, Stats., as renumbered by 1985 Wisconsin Act 182, may seek a contested case hearing by serving a petition for hearing on the Secretary of the Department of Natural Resources within 30 days after this decision is mailed by the Department.

Any person aggrieved by this decision may seek judicial review by serving and filing a petition for judicial review in accordance with the provisions of ss. 227.52 and 227.53, Stats., as renumbered by 1985 Wisconsin Act 182, within 30 days after this decision is mailed by the Department. Any petition for judicial review of this decision shall name the Department of Natural Resources as the respondent.

This notice is provided pursuant to s. 227.48(2), Stats., as renumbered by 1985 Wisconsin Act 182 and should not be construed as an indication that the Department believes that any person has a right to appeal this decision.

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For the Secretary

By ___________________________ Date ___________________________

Robert W. Roden, Director
Bureau of Water Regulation & Zoning
Before the Department of Natural Resources

Approval of Floodplain Zoning Ordinance
#1 (City/Co/Village of) Approval No. 3-F-#2

Findings of Fact

1. On #3 __________________________, the #4 __________________________ Ordinance following public notice and hearing.

2. The Department has reviewed this ordinance for compliance with minimum standards for floodplain zoning contained in Chapter NR 116, Wisconsin Administrative Code.

3. The Floodplain Zoning Ordinance is not consistent with the provisions of the revised Ch. NR 116, Wis. Adm. Code, which became effective March 1, 1986, in the following respects:
   A. Section 116.13 requires development in the flood fringe to have access to dry land during the regional flood.
   B. Sections NR 116.13 and NR 116.16 require that all development in floodplain areas be elevated or dry-floodproofed and not occur at elevations below Regional Flood Elevation.
   C. Section NR 116.15 establishes uniform standards for nonconforming uses and buildings in floodplain areas provided they are not inconsistent with ss. 59.97(10) or 62.23(7)(h), Wis. Stats.
   D. Section NR 116.20 requires the department to provide analysis assistance for projects not exceeding 5 acres or $125,000.00.
   E. Sections NR 116.07 and NR 116.11 include revised standards to be used for hydraulic or hydrologic floodplain studies.
   F. Chapter NR 116 permits only development which does not cause an obstruction to flood flow or increase in flood height equal to or exceeding 0.01 foot.
   G. Section NR 116.08 requires zoning of areas downstream of dams based on the ability of the dam to survive the regional flood.

4. The #5 __________________________ has areas which are not currently mapped as floodplains based on the hazard-potential of a dam or dam(s) which affect the community. The dam or dams have not been analyzed or inspected for their hazard potential.
CONCLUSIONS OF LAW

1. The Department is authorized by s. 87.30, Wis. Stats., and ss. NR 116.21 and 116.22, Wis. Adm. Code to review and approve floodplain zoning ordinances and amendments.

2. The community has complied with the procedural requirements for adoption of this ordinance according to Wisconsin Statutes.

3. This ordinance substantially complies with the requirements of Ch. NR 116, Wis. Adm. Code subject to the conditions of this approval.

4. The conditions of approval set forth below are necessary to ensure compliance with Ch. NR 116, Wis. Adm. Code.

DECISION

The Department approves this ordinance subject to the following conditions:

1. The (6) ___________________ adopts amendments or revisions of its Floodplain Zoning Ordinance to correct the deficiencies noted in the Findings of Facts No. 3 within six (6) months of this decision.

2. When an analysis is completed for dams affecting the community, changes to the zoning of downstream areas must be adopted within 6 months after receipt of the analysis.

3. There shall be continuous and effective administration and enforcement of this ordinance.

4. Copies of all notices of and decisions on all amendments, special exceptions or conditional uses, and variances, affecting floodplain zoning, shall be mailed to the #7 ___________________ District office of the Department and amendments must be reviewed and approved by the Department before they become effective.

5. The #8 ___________________ shall amend the ordinance within six (6) months of the receipt of upgraded flood data, changes to State standards, or to reflect legal precedents or improved technical information and methods.

6. The #9 ___________________ shall amend the ordinance within six (6) months of receipt of any flood data that becomes available to regulate the floodplains of streams presently not delineated on the floodplain zoning map; or those streams that may come under future jurisdiction.

NOTICE OF APPEAL RIGHTS

Any person aggrieved by this decision who meets the requirements of s. 227.42, Stats., as renumbered by 1985 Wisconsin Act 182, may seek a contested case hearing by serving a petition for hearing on the Secretary of the Department of Natural Resources within 30 days after this decision was mailed by the Department.

Any person aggrieved by this decision may seek judicial review by serving and filing a petition for judicial review in accordance with the provisions of ss. 227.52 and 227.53, Stats., as renumbered by 1985 Wisconsin Act 182, within 30 days after the decision is mailed by the Department. Any petition for judicial review of this decision shall name the Department of Natural Resources as the respondent.
This notice is provided pursuant to s. 227.48(2), Stats., as renumbered by 1985 Wisconsin Act 182 and should not be construed as an indication that the Department believes that any person has a right to appeal this decision.

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For the Secretary

By ___________________________ Date ________________
Robert W. Roden, Director
Bureau of Water Regulation & Zoning
Several questions have arisen regarding the proper interpretation of s. 30.202, Stats. (created by Chapter 240, Laws of 1981), in regard to dredging and the disposal of dredged material in the Mississippi, St. Croix, and Black Rivers.

1. To what geographic area does the law apply?

Section 30.202 applies to those segments of the Mississippi, Black, and St. Croix rivers where the Corps of Engineers maintains navigation channels. While coverage of the law is not limited to the navigation channel itself, it cannot be applied on the Black or St. Croix rivers upstream of the authorized navigation channels. In addition, the law only applies to disposal of dredged materials in Wisconsin waters although these materials could have been dredged from waters within the states of Iowa or Minnesota.

2. What types of actions are covered?

Dredging by the Corps does not need a state permit since it is not an activity covered by Section 404(t) of the Clean Water Act. Corps actions involved in the disposal of material dredged from the beds of these rivers (below their ordinary high-water marks) are eligible for the statutory exemptions which are listed, provided the actions are sanctioned through the "GREAT" process as outlined in the memorandum of understanding. These include actions needed for proper and environmentally sound disposal of dredged material, such as placing riprap along a dredged material island to prevent erosion.

3. Who is authorized to do work which can be exempted by the statute?

Authorized work may be done by the U.S. Army Corps of Engineers or by any agent working on behalf of the Corps of Engineers. This would mean work done on behalf of the Corps through a written agreement or under a contract. It does not include work undertaken by a third party and merely permitted or otherwise allowed by the Corps.
4. What does the statutory exemption mean?

The exemption means that these types of projects are not subject to following procedural requirements or obtaining specific permits or approvals which are listed in s. 30.202. Also, this exemption allows certain things to be done (e.g., island creation) which are not allowed under other statutes. While the Department does not need to follow the "letter" of these other laws because of the procedural exemptions, we should do our best to follow their "spirit" and to not undertake projects which would be contrary to major substantive provisions of those laws that we are being exempted from.

5. What should we do to cooperate with local zoning officials?

First, we need to be clear that s. 30.202 indeed provides a statutory exemption from local floodplain or shoreland zoning ordinances. In addition, we must recognize that other local zoning ordinances adopted under other statutory provisions (e.g., s. 59.97, Stats.) are not overridden and permits under those zoning ordinances must still be obtained. Again, we should make the maximum effort to avoid projects that would be contrary to provisions in NR 115, NR 116, NR 117, or NR 118. For projects in the hydraulic floodway of these rivers, we should perform the proper engineering analysis, advise the local unit of government of new water surface elevations, and make appropriate legal arrangements with affected property owners (you recall that we require this of the Department of Transportation).

RWR:ceb
cc:    Steve Miller - WM/4
       Jim Addis - FM/4
       Terry Moe - WCD
       Claire Enerson - Dodgeville
       Michael Cain - LC/5

7313J
DATE: March 20, 1987                    FILE REF: 3550 (WMC)

TO: District Directors

PMMS Response
Insertion: Chapter 120, Water Regulation Handbook

FROM: Scott Hausmann - WZ/6

Distribution: Program Staff

SUBJECT: Interpretation of 30.20(2) and NR 346.09

We have been asked the question that if the Corps of Engineers dredges and stockpiles usable sediment that is offered for sale to any interested party does the Corps or sponsoring municipality have to reimburse the state for the material sold.

The keys to this question are:

1. Does s. 30.20, Stats., apply to the project?
   A threshold question is whether the project falls within the preview of s. 30.20, Stats. If the Corps of Engineers is the project sponsor and the project is exempt from our s. 30.20, Stats., requirements, then the contract fee requirements would not apply to the dredge material.

   If the project is locally sponsored and s. 30.20 applies, then the issue must be reviewed further.

2. Does the contract fee requirement apply to the water body being dredged.
   Section 30.20(l), Stats., provides that no person may remove material from the bed of any navigable lake or the bed of any outlying water without a contract. "Outlying waters" means Lake Superior, Lake Michigan, Green Bay, Sturgeon Bay, Sawyer's harbor and the Fox River up to DePere. The contract fee requirement only applies to removal of materials from the beds of natural lakes as defined in NR 346.03(5), Wisconsin Administrative Code. This definition includes certain "non-artificial widenings of a river channel."

   For many municipal projects, the dredging may occur on river bed rather than from the bed of a natural lake. The NR 346 dredging contract fee would not apply to those dredge spoils which are not from the bed of a "natural lake."

3. Does the project meet the exemption standards under NR 346.09, WAC and s. 30.20(2)(a), Stats.?
   Subsection 30.20(2)(a), Stats., provides that "Every contract . . . shall fix the compensation to be paid to the state for material so removed, except that no compensation may be paid for the material if the contract is with the municipality . . . and the material is to be used for a municipal purpose and not for resale."
This same language is contained in NR 346.09, WAC.

The statute authorizes a waiver of the contract fee only if the dual standard is met, i.e., the project is for a "municipal purpose" and the material is not offered for "resale." It is our opinion that the resale of the dredged materials removed it from the statutory exemption and requires us to impose the dredging contract fees. The fees should be determined consistent with s.NR 346.05, WAC.

Reviewed By: John Coke  
        Mike Cain

RWR:JC:sm
DATE: March 18, 1987                      FILE REF: 3500 (WMS)

TO: District Directors

PMMS Response
Insertion: Chapter 120, Water Regulation Handbook

FROM: Robert Roden - WZ/6

Distribution: Program Services

SUBJECT: Program Guidance on Farm Drainage Ditches

We have been asked to provide program guidance concerning the exclusion of farm drainage ditches from section 30.20, Wis. Stats.

In 1981 the legislature changed the status of farm drainage ditches by declaring them not navigable unless "it is shown that the ditches were navigable streams before ditching." It further defined a farm drainage ditch as "any artificial channel which drains water from lands which are used for agricultural purposes." This program guidance is intended to further clarify the statutory definition by defining what is meant by: stream, artificial channel, agricultural purposes, prior stream history and draining lands.

"Streams" are defined in the handbook definition section (see page 7). This definition states that a "stream means a watercourse…" Watercourse is also defined in the handbook:

"A running stream of water; a natural stream fed from permanent or natural sources, including rivers, creeks, runs, and rivulets. There must be a stream, usually flowing in a particular direction, though it need not flow continuously. It may sometimes by dry. It must flow in a definite channel, having a bed or banks, and usually discharges itself into some other stream or body of water. It must be something more than a mere surface drainage over the entire face of the tract of land, occasioned by unusually freshets or other extraordinary causes. (Hoyt v. City of Hudson)"

An "artificial channel" means that the channel exists as a result of human excavation and has lost its natural stream definition. An altered stream section does not necessarily result in a stream becoming converted to an artificial channel. For example, a riprap project may significantly alter the bank and portions of the stream bed without causing the stream to lose its definition, i.e., it still looks like a stream. The call between artificial channel and stream should be based upon the predominate characteristics of the water body involved. Artificial channels should be relatively uniform in stream slope, uniform in cross section and relatively void of meander patterns. Artificial channels do not include natural water courses either upstream or downstream of the altered section. It is possible that an artificial channel may have been created from a drainage feature that has had a previous stream history. Previous stream history may be established from traditional methods; e.g., original government surveys, aerial photography, plat maps, etc. After stream history has been established, it is necessary to establish a history of navigation. History
of navigation can be established by newspaper articles, interviews, photography or personal accounts. If it is not possible to establish a record on what appears to be obviously navigable watercourses, we should attempt to establish navigability by geometry of the area. To be considered navigable, we should be prepared to show that the previous stream was at least 4 feet wide and carried at least 6 inches of water on an annually recurring basis. It is possible to determine the likelihood of navigation by estimating the annually reoccurring flood and comparing to water depth. For example, in order to attain 6" depth of stream on a 4 foot wide stream with slope of .01, .001 and .0001 ft/ft, it would be necessary to have flood flows of 0.6, 1.5 and 6.5 cfs, respectively. The meandering of the channel must also be considered. Considering the meander pattern as a standard sinusoidal wave, the ratio of amplitude to the length should not exceed 8 if the stream is to be navigated with a 10-foot skiff or canoe.

"Draining of lands used for agricultural purposes" means an improvement or expansion of the existing drainage systems of waterways, watercourses and rivers in order to more efficiently drain surface waters and/or to lower the existing water table on existing agricultural lands. The act of draining, as referenced in this statute, should be construed to mean new ditching and not the deepening or widening of downstream control sections. The lands drained should be immediately adjacent to the project. The channel or channels upstream or downstream from the project, although part of the drainage system, do not serve as agricultural drains. This activity must be associated with an existing agricultural need to crop the land.

Reviewed by: Scott Hausmann
Mike Cain
Ken Johnson
TO: District Directors

PMMS Response
Insertion: Chapter 120, Water Regulation Handbook

FROM: Scott Hausmann - WZ/6

Distribution: Program Staff Bureau of Legal Services

SUBJECT: Underwater Search & Discovery Procedures (Treasure Hunting)

We have been asked several questions regarding the practice of "Treasure-Hunting" operations in navigable waterways. Treasure hunting operations are distinguished from typical dredging operations requiring permits under s. 30.20, Stats., by the characteristics of: Bed material is being sifted and redeposited in or very close to its original location, removal is limited to "foreign" matter, material is handled by hand or equipment that is manually portable, volume of material disturbed is minimal and no significant recontouring of bed is involved. The questions asked and their answers are as follows:

1. Question: What permit or approvals will be required?
   Answer: Past Department practice has been to not require formal permits for this activity. This past practice was premised on the impacts of such a limited activity would be minimal, if any. To date it is not apparent that this activity is widely practiced or that the impacts are significant enough to warrant a change in the way we handle this activity. No formal approval or permit will be required for this activity unless a substantive complaint is received or the activity does not meet the criteria identified below.

2. Question: Can this activity be done on some waterways and not others?
   Answer: Yes. Such a determination should be made on a case-by-case basis considering such factors as potential impacts to spawning areas, destruction of vegetation, changes in bottom contours, increased turbidity, disturbance of hazardous or toxic materials, conflicts with other users of the waterbody, etc.

3. Question: What types of notification or limitations would be required?
   Answer: Prior notification to the Department will not be required for this activity. Limitations may be placed on this activity, it warranted, to resolve a substantive complaint and may consist of items such as, but not limited to, the following:

   a. Removal of undesirable materials such as broken glass, cans, etc.

   b. No substantial recontouring of the lake or stream bed, any holes created should be refilled at days end.
c. Need for turbidity curtains.

d. Need for restricting operation to certain times of the day, week or year.

e. Limit equipment size to that which is manually portable.

4. Question: Does the size of the area make a difference in our determination:

   Answer: Yes, in order for the potential impacts of this activity to be considered minimal and therefore not requiring a permit the project size should not exceed 100 square feet or area or 4 cubic yards of volume of material disturbed per day per project site. Projects in excess of these size limits or that involve complaints or significant impacts that cannot be resolved by incorporation of the limitations identified above should be required to obtain a s. 30.20 permit.

In addition, anyone inquiring about the practice of "treasure hunting" should be informed that objects lost or resting on the bottom of the waters of the state are presumed to be owned by the original owner, unless there has been a transfer arising out of insurance considerations or other legal procedures.

Section 170.07 to 170.11, Stats., give the proper procedure to follow where any person finds goods of another person of the value of $3.00 or more and the owner is unknown. It is possible that such procedures might be applicable to any property found on the bed of any waters of the State. If the owner of the property found is known, it is assumed that he is entitled to it.

Under certain circumstances, if property is found placed or imbedded in navigable waters, it is possible that the owner of the land forming the bed of the water where the article is found may claim to be the owner, assuming that he is different from the original owner of the article. This would be applicable where the navigable water in question is a reservoir or a stream. The State of Wisconsin is considered to be the owner of the bed of any natural lake.

In cases where the objects to be salvaged have a historical or archaeological interest, a permit must be obtained from the Director of the State Historical Society. The conditions under which such permits can be granted are given in section 27.012, Statutes.

Reviewed By:
John Coke
Michael Cain

JC:hf
DATE: October 10, 1988

TO: District Directors

Insertion: (WMS)
PMMS Response
Chapters 100, 110, 120 Water Regulation Handbook

FROM: Scott Hausmann

SUBJECT: Section 30.19(lm)(e) exemption from permit requirements for authorized enlargements

1987 Wisconsin Act 374, the new Chapter 30, changed section 30.19 to allow for maintenance dredging of existing authorized enlargements. Now that we've had a little experience with this section several questions have come up which I'll address in this memo.

1. NR 340 regulates non metallic mining and specifies the requirements for review and permitting. How does this administrative code relate to the exemption for work required to maintain authorized enlargements found within section 30.19?

   All existing permits authorized under the old section 30.19 and NR 340 remain unaffected. The status of mining activities issued since adoption of the Act 374 will depend on how the permit was drafted. If the permit cited only section 30.19, the exemption found within section 30.19 is applicable and we could not require a permit for work required to maintain the original dimensions without revoking the original authority. You should note that section 30.07 allows for the revocation of Chapter 30 permits "for good cause".

   When appropriate, future permits for non metallic mining should include specific conclusions of law specifying that the department has regulatory authority under sections 30.19, 30.195 and 30.20. Additionally, these permits should specifically state within the order section that additional permits are necessary for maintenance dredging of unconnected enlargements.

2. Section 30.07 restricts the length of permits to 3 years with the possibility for a 2 year extension. Section 30.20(2) allows the department to issue contracts and permits for up to 10 years. Since the two statutes conflict, the more specific language in s. 30.20 Stats., governs for dredging permits. How will this affect permits issued under NR 340?

   Permits issued prior to the enactment of Wis. Act 374 are unaffected. Permits issued after the enactment are subject to these time frames and must be repermitted upon their expiration. If a permit contains a s. 30.20, Stats., permit or contract, we can use the longer time frames outlined in that statute.

3. Some harbors are or have been authorized by use of section 30.19. Can the Department retain authority over dredging operations?

   The exemption language within section 30.19 does exclude us from requiring a future permit but we should be able to draft permits to allow our continuing review. For example, a 30.19 permit could be
conditioned with a requirement to notify the department of any future dredging and allow for a 30 day review period. I suggest that you use such a provision cautiously and coordinate with the bureau.

4. Some 30.19 permits issued before the enactment of Wisconsin Act 374 specified a sunset date within the permit. How are these permits affected by the exemption from permit for maintenance dredging found within s. 30.19 Wis. Stats.?

We construe any permit limitations issued before the enactment of Act 374 as being valid and unaffected by the exemption specified in section 30.19(lm)(e). It would be unreasonable to assume that specific permit conditions, necessary to protect the water body involved, would be overruled by future statutes. A contrary assumption would force us to anticipate future legislation within the permit process. Therefore, an authorized enlargement with an expired permit date will be considered completed and will require new authorization before maintenance dredging can occur. If no expiration date was specified within the original 30.19 permit conditions, authorization for the enlargement must be considered "active" and the exemption found within s. 30.19(lm)(e) valid.

Reviewed by: Ken Johnson
Robert Sonntag
Mike Cain
DATE: June 29, 1989

TO: District Directors

PMMS Response

Insertion: Chapter 120 of the Water Regulation Handbook and Chapter 4 of the Floodplain Shoreland Management Guidebook

FROM: Scott Hausmann - WZ/6

SUBJECT: DNR Authority to Regulate Mossing and Peat Mining

In this regulatory context we will define mossing as the removal of actively growing sphagnum moss where underlying materials are left intact and capable of supporting sphagnum regrowth. Such activity does not include excavation of soils on uplands or bed materials below the ordinary high water mark of waterways. Peat mining is defined as the excavation of sphagnum and related underlying organic matter which is at least partially decomposed (peat) and comprises either part of the soil on uplands or bed materials in waterways.

CHAPTER 30 JURISDICTION

Where sphagnum moss is attached to the bed of a waterway it may be harvested by the riparian who holds title to the bed at the location of the harvest. This policy is consistent with case law that generally holds that products of the bed of a waterway belong to whoever holds title to the bed. Moss from free floating bog mats may be harvested by either riparians or nonriparians. The Department must apply endangered species laws before allowing harvest to proceed (s. 29.415, Stats. and NR 27, Wis. Adm. Code).

SHORELAND AND WETLAND ZONING PROVISIONS

Mossing is a permitted use, i.e. harvesting of a renewable wild crop, under NR 115.05(2)(c)2. and NR 117.05(2)(b). By the rules this activity is subject to performance standards, i.e. the removal may not be injurious to the natural reproduction of the crop and may not involve filling, flooding, draining, ditching, excavating and so on.

Peat mining is not a permitted use of shoreland wetlands. It is an activity that is inherently different than moss harvest. It involves excavation of a nonrenewable resource and may alter the basic hydrology, species composition and function of wetlands. Peat mining in shoreland wetlands requires site specific application of appropriate wetland rezoning criteria and amendment procedures outlined in administrative rule and local ordinance. Some fish and wildlife habitat improvement projects which are a permitted use of shoreland wetlands may involve incidental removal of peat.

SECTION 404 OF THE CLEAN WATER ACT
Generally, mossing and peat mining will not require Section 404 permits or Section 401 water quality certification since both activities involve the removal of materials and not a discharge of pollutants to waters of the U.S. However, related activities which involve discharges to wetlands or waterways (such as road construction or ditching and side casting spoils to dewater an area) may require general or individual Section 404 permits and Section 401 water quality certification.


Requested by: Vic Pappas

Drafted by: Mike Dresen

Reviewed By: Dale Simon - WZ/6
               Mike Cain - LC/5
               Linda Wymore - LC/5

MD:EB:lk
v:\8907\wz9moss.mdd
DATE: August 8, 1989   FILE REF: 3550   (WMC)

TO:    District Directors

PMMS Response
Insertion: Chapter 120 of the Water Regulation Handbook and Chapter 4 of the Floodplain Shoreland Management Guidebook

FROM:    Scott Hausmann - WZ/6

Distribution:    WZ Program Staff Bureau of Legal Services

SUBJECT:    DNR Authority to Regulate Mossing and Peat Mining

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Chapter 30 Jurisdiction

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Requested by: Vic Pappas

Drafted by: Mike Dresen

Reviewed By: Dale Simon - WZ/6
            Mike Cain - LC/5
            Linda Wymore - LC/5

MD:EB:lk
DATE: August 8, 1989

TO: Scott Hausmann

FROM: Bob Roden

SUBJECT: Appeal Rights for Actions With No Notice

Mike Cain has just informed me that Bob Selk (Dept. of Justice) advised that there are two options he sees as being legally valid for s. 30.20 contract decisions in view of the R. W. Docks Court of Appeals decision. These choices are:

1. Only offer the contested case hearing option for appeal of the decision.

2. Issue a "preliminary decision" and offer to negotiate with the applicant if there is a dispute over the decision (this is apparently a procedure used in the Solid Waste program)

Given the workload implications of the second option, the first one appears to be the way to go. The problem is that this approach should be used for all decisions where there is no public notice, not just for decisions under s. 30.20.

I have advised Duane Lahti, who has 3 pending s. 30.20 contract decisions, to only offer the contested case hearing appeal option in these decisions. Can you have staff prepare more detailed guidance [listing the ch. 30 and 31 plus shoreland zoning decisions where there is no public notice (this might also apply to a number of 401a decisions) and including the correct language] and also take steps to change the permit format where it is necessary? I think we can continue to use existing forms until they are exhausted; the chances of someone appealing an unnoticed grant seems pretty small.

Any questions, let me know. Thanks.

cc: Mike Cain - LC/5
   Water Management Supervisors
DATE: May 9, 1990  FILE REF:

TO: District Directors

PMMS Response
Insertion: Chapter 120 of the Water Regulation Handbook

FROM: Scott Hausmann - WZ/6

Distribution: WRZ Program Staff

SUBJECT: Time Limits for Permits and Contracts Issued Under s. 30.20, Stats.

Recently we have been asked to clarify the time limits for permits and contracts approved under s. 30.20, Stats. In order to gain a clear understanding of the applicability of law we must first understand the meaning of a few terms within each subsection of the law.

Under section 30.20(l)(a)

Navigable lake should be construed as any "natural navigable lake."

Outlying waters means Lake Superior, Lake Michigan, Green Bay, Sturgeon Bay, Sawyer's Harbor and the Fox River from its mouth up to the dam at DePere as defined in s. 29.01(11), Stats.

Under section 30.20(l)(b)

"Any lake not mentioned under par. (a)" includes all other navigable lakes subject to the jurisdiction of the department under chapter 30, Stats. This would include that portion of additional lake bed crated by the raising or enlarging of a natural lake (dam on outlet) or any artificially constructed lake authorized under chapters 30 or 31 or an artificial lake that has accrued because status through time, used or as determined by the courts.

Any stream means all streams in the state and any farm drainage ditch that was not a navigable stream before ditching if the dredging may have a long-term adverse affect on cold-water fishery resources or may destroy fish spawning beds or nursery areas.

Under section 30.20(2)

Contract means a legally binding agreement between the state and any person to remove material from the bed of any natural (emphasis added) navigable lake or any outlying water as required under s. 30.20(l)(a), Stats.

Permit means a document of permission that may be issued by the state only upon a finding that the issuance of a permit will be consistent with the public interest in any stream or lake as defined under s. 30.20 (1)(b), Stats., above.

Under section 30.20(2)(a)
Contracts are authorized under this paragraph for natural navigable lakes and outlying waters when the **purpose is for the lease or sale** of the bed material. Contracts under this section must be consistent with public rights and the contract includes conditions as may be necessary for the protection of the public interest and the interests of the state. Under this section, contracts are limited to a maximum of 5 years.

**Under section 30.20(2)(c)**

Contracts are authorized under this paragraph for natural lakes and outlying waters when the **purpose is not for the lease or sale** of bed material and only upon a finding that a contract approved under this paragraph will be consistent with the public interest. In this case contracts are limited to a 10 year period provided the recipient of the contract notifies the department at least 30 days before removing any material. Because contracts issued under this paragraph can be for a period of up to 10 years and considering dredging is seasonal activity, the 30 day notification provision is required for each dredging season.

Permits may be issued under this paragraph for the removal of material from the bed of any stream or artificial lake, not included in s. 30.20(l)(a), Stats., provided the issuance of a permit is consistent with the public interest. These permits may be issued up to ten years provided the applicant notifies the department at least 30 days before removing any material.

In summary, dredging contracts subject to the 5 year limitation under s. 30.20(2)(a) are for dredging projects in which the bed material is for lease or sale. All other dredging contracts and permits are subject to the 10 year limitation.
DATE:       June 1, 1993

FILE REF: Dredging

PLACEMENT:  Ch. 120, WZ Guidebook

DISTRIBUTION:  WZ Program Staff

TO:         John Gozdzialski  - NWD/Spooner

FROM:       Scott Hausmann  - WZ/6

SUBJECT:   Disposal of Uncontaminated Great Lakes Dredged Material

Recently you requested written clarification of Department policy and practice on in-water disposal of uncontaminated dredged material from the Great Lakes.

Until the early 1970s, the Corps under legal principal of federal supremacy routinely disposed of dredged material in the open waters of the Great Lakes. This was done over the protests and contrary to most of the Great Lakes States laws on dredging. In 1972, the Clean Water Act was passed (and subsequently modified) and sections 401 and 404T required the Corps to comply with state water quality laws and to apply for state permits. Because state law does not provide for-in-water disposal of dredged material, the Corps has been prevented from disposing of dredged material in the lakes since 1972.

The basis of state policy and practice is s. 30.12 and s. 30.20, Wis. Stats. The dredging law, s. 30.20, allows the removal of materials from the bed of navigable waters by permit or contract. Case law has emphasized that the dredged material must be physically removed from the waterway and disposed of according to applicable laws. Section 30.12 regulates the placing of fills and structures and only allows "structures" to be placed in navigable waters by permit. Numerous court cases have clarified that structures must have "shape, form and utility" and that dumping, pumping or placing dredged or other unconfined, unconsolidated materials is not a structure.

Thus, the combination of ss. 30.20 and 30.12 generally prohibit the placement or deposit of dredged material into navigable waters, unless the dredged material is contained within or used as part of some type of containing structure. Our policy and practice simply repeats the legal requirement-no unconfined in-water disposal of dredged or fill material.

However, exceptions to this general policy and practice do exist, the most notable being the placement of dredged material behind approved bulkhead lines and the special legislative authority for disposal of Corps generated dredged material on the Mississippi River. (This legislation was the result of the 10 year long Great River Environmental Action Team (GREAT) study and Environmental Impact Statement.)

The specific policy and practice on the many options for the disposal of uncontaminated dredged materials are:

**Permanent Upland Disposal Site** - Landspreading, filling an abandoned gravel pit or creating a diked disposal area, are examples of permanent upland disposal. This option requires a solid waste license or waiver under ch. NR 500 to 522, Wis. Adm. Code. Upland disposal sites may require a pollutant discharge permit under ch. NR 200 if the site has a discharge to a waterway or to the groundwater.
Transfer/Reuse Site - A permanent site for the storage of reusable materials requires a solid waste license (or waiver of license). The site could be located on the bed of a waterway but a containment structure authorized by structure permit (s. 30.12, Stats.) would be required.

Shore Protection - Using dredged material in riprap or other shore protection project's does not require a permit if the dredged material is placed above the ordinary high-water mark (OHWM), or behind an approved bulkhead line. Restoration may be possible without permits or other state authority if the purpose of the filling is to reclaim suddenly lost shoreland. In this case filling must be done within one year after the damaging erosion events.

Fill Behind Bulkhead Lines - Dredged material may be used as fill behind an approved bulkhead line. A pollutant discharge permit or solid waste license may be required. Only a municipality may establish a bulkhead line, with department approval. To be approved the bulkhead line must be in the public interest and must conform as closely as possible to the existing shore.

Submerged Lands Leases - A bulkhead line may extend farther from shore if it is combined with a submerged lands lease from the Commissioners of Public Lands pursuant to s. 24.39(4), Stats. A lease must be combined with a bulkhead line in order for fill or structures to be placed in the leased area without separate permits. The lease/bulkhead line approach may be used to authorize navigation improvements, harbor facilities, or recreational facilities "related-to navigation for public use". Only the riparian owner may obtain such a lease (for recreational facilities, only municipalities that are riparian owners are eligible), although the statute does provide for sub-leasing. The Department must make findings that proposed physical changes in the leased area are consistent with the public interest and that excessive destruction of wildlife habitat will not result [see s. 30.11(5), Stats.].

Marsh Restoration/Creation - Instead of creating dry land, fill may be used to create or restore wetland conditions provided they would serve a public recreational purpose, including the provision of wildlife habitat. Marsh creation might be possible by combining a submerged lands lease and a bulkhead line or to replace shoreline material which has eroded in the past year. A marsh barrier project has been approved on the west shore of Green Bay using a submerged lands lease/bulkhead line.

Filling Underwater Mining Sites - Filling an underwater mining site is generally prohibited. It would require direct legislative authorization. The major concern is movement of the material from the site to areas where it might affect fish and wildlife habitat and water quality and navigation.

Littoral Drift Continuation - Breakwaters and similar structures interrupt the natural along shore transport of sediment by currents (littoral drift) causing sediments to accumulate updrift and increasing downdrift erosion. If the dredged materials are clean and of the appropriate gram size, depositing them downdrift from the artificial barrier would preserve an important natural process and certain updrift configurations might prevent entrapment of sediment. Littoral drift continuation might be possible by combining a submerged lands lease and a bulkhead line, provided the beach is open to the public. This authorization approach was used for the beach nourishment and littoral drift research projects on Wisconsin Point and Kewaunee Beach.

Legislative proposals in 1985, 1986 and 1987 to allow by permit littoral drift continuation and beach nourishment were not passed.

Beach Nourishment - Clean dredged materials can be used to nourish an existing beach as a shore protection method. This use requires no permit if the dredged material is placed above the ordinary high-water mark or behind an approved bulkhead line. Beach nourishment below the ordinary high-water
mark has been authorized in the past by combining a submerged lands lease and a bulkhead line, provided the beach is open to the public. Beach nourishment is commonly used to offset damage caused by storms or by coastal structures that interfere with littoral drift. A pollutant discharge permit may be required and standards in ch. NR 347 dealing with particle size must be met.

**Island Creation** - Fill may be used to create an island if the material is contained within a barrier structure. A structure permit or a submerged land lease and bulkhead line would be required to pursue this option. Islands without a confining structure have been created on the Mississippi using the special authority given to the Corps of Engineers following the GREAT study.

**Lakebed Grant** - A lakebed grant is the transfer of the title of submerged lands from the state to a municipality by the state legislature. On Lake Michigan, laws governing the establishment of bulkhead lines and laws requiring permits for placement of structures or deposits in navigable waters and for dredging are not applicable in lakebed grant areas (see s. 30.05, Stats.). However, other state laws (e.g. chs. 144 and 147) still apply in these areas. On Lake Superior, exemptions from permit requirements must be contained in the legislation authorizing a specific lakebed grant. Lakebed grants allow municipalities to fill the designated area for certain specified public trust purposes. (Note: Corps permits are required for any filling under Section 10 of the Rivers and Harbors Act and Sections 404 of the CWA. A Section 401 water quality certification would also be required).

Other options for the disposal of uncontaminated dredged materials that have been permitted in the past include:

1. Surface application on agricultural land as a soil conditioner
2. Capping for landfill
3. Highway ice control
4. In the construction of other projects such as marinas, harbor facilities, bridges, causeways, parks, roads, sewage treatment facilities, etc.

Additionally, I do not know of any current legislative proposals to allow unrestricted in-water disposal in the Great Lakes of Wisconsin, nor do I have any knowledge that the policy and practices of the regulating agencies in Minnesota are significantly different than those of the Department except that Minnesota does not have a general statutory prohibition on filling in navigable waters. If you have any additional questions please contact me.

SH:gw

v:\9305\wz9dredg.sph

cc: Ted Smith - NWD/Spooner
Robert W. Roden
DATE: June 18, 1997
TO: Water Management Specialists
FROM: Mary Ellen Vollbrecht - FH/4
FILE REF: HANDBOOK CH.120

SUBJECT: Major Pipeline Construction Projects - Department Staff Roles and Process

Recently we have received permit applications for a major pipeline project that traverses the state. We are also aware of other major pipeline proposals and railroad spur expansions that are in the early stage of planning. These activities often involve multiple wetland and waterway crossings that require extensive staff time to review and review. The following process is intended to help make these work efforts as efficient as possible.

Initial contact is often made by the applicant with central office staff looking for a specific department contact. Because the wetland/water regulatory programs are highly decentralized and require a multidisciplinary review including compliance with WEPA, the applicants are instructed to set up a preconsultation process with the appropriate WMS prior to submitting an application. Frequently, the preconsultation process results in the avoidance and minimization of adverse impacts and special permit conditions are worked out between the applicant and the department.

The primary disciplines associated with these projects are the water management specialists - Fishery Management and Habitat Protection (FH) and environmental analysis personnel - Integrated Science Services (SS). Secondary support is provided wildlife managers, fishery managers, water quality biologists, foresters and law enforcement.

To facilitate the permitting process for both the applicant and department staff the following guiding principles should be followed.

Staff Roles

1. The wetland and water regulatory decisions applicable to this type of activity are the responsibility of the water management specialist (WMS) and similarly assigned staff.

2. Central office SS staff are responsible for coordinating the review and development of the EIR with SS field staff. Once completed and approved, SS central office staff are responsible for notifying the WMS concerning compliance with WEPA.

3. The WMS is responsible for coordinating the review and comments of department staff and developing permit/water quality certification conditions in consultation with other staff.

Permit Application Process

4. The WMS should be advising the applicant that a $100 permit fee will be required for each waterway and wetland crossing where the department has to make a permit decision or water quality certification determination. This change in previous guidance to both the applicant and staff recognizes the substantial review and coordination time needed for these projects. The applicant is aware of the change in fee structure. There will be
some instances where both chapter 30 and NR 299 (s. 401, CWA certification) will be applicable to the same crossing. In that situation a $100 fee will cover both.

5. Applications for a permit and/or water quality certification should include the minimum information required under our standard water regulation permit and water quality certification processes. Design and plan information will vary depending on the sensitivity and uniqueness of the area being traversed. Generic plan drawings with specific dimensions applied to the plans are common to the regulatory process. Many crossings will likely fall under this category. Conversely, there will be crossings involving unique resources or physical settings where more detailed plan information is appropriate and should be required of the applicant.

6. Regions are encouraged to assign each crossing a separate docket number to reflect alteration to a particular waterway but combine the permit decisions in one document on a county by county basis. The same recommendation holds true for decisions under NR 299. This will help reduce paperwork and facilitate the authorization of those activities not requiring special conditions as well as those that do.

7. The Corps is presently processing the Lakehead Pipeline project as one individual permit. As a result our permits and water quality certification determinations will be provided to the COE on a county wide basis, individual permit or individual water quality certification basis or any combination thereof. To promote consistency we encourage you to develop combined approvals on a county wide basis. Therefore each approval issued by the WMS will become a condition of the COE individual permit. Copies of your decisions should be sent to your COE and local zoning counterparts.

8. Previously, the Bureau agreed to issue the permits and water quality certification documents from the central office at the discretion of the WMS. In retrospect, this approach may only appear as saving field staff time, when in reality it would have only increased the time required for the regulatory process, increased communication problems, understated the actual workload associated with projects of this magnitude, and complicate the data entries of our permit tracking system. Therefore all permits and water quality certification decisions will be the responsibility of the assigned WMS. As a first step, field staff may want to determine where the standard permit conditions developed by the bureau can be applied and where specialized review and conditions are needed.

I hope this guidance clarifies the roles and process. If you have any other questions please contact Dale Simon, Steve Ugoretz or me.

cc: Regional Directors
Regional Water Leaders
Regional Land Leaders
Basin Team Leaders
Susan Sylvester - AD/5
Dave Meier - AD/5 S
teve Miller - AD/5
Mike Staggs - FH/4
Dale Simon - FH/6
Steve Ugoretz - SS/6
CHAPTER 120  Utility Crossing Projects

There are basically five different scenarios with which we review utility projects crossing public waters and wetlands. They receive different levels of review based on installation methods and natural resources involved. Fees vary accordingly. Those are:

1. **One Time Waterway/Routine Methods.**

Utilities that have been granted a one time permit for routine electric utility waterway crossings that include overhead, bored or plowed utility line crossings. **Please note these permits do NOT authorize wetland crossings that are not located below the OHWM of a public waterbody.** These permits require an annual notification to the department and include information such as location map of activities, construction method, project schedule and project corridor description. These projects are then reviewed by department staff for compliance with the conditions of the permit and are presumed to be approved unless we notify the utility. These projects are linear in nature and may involve crossings throughout the state. In order to comply with the new fee schedule these permits are considered to be a consolidated utility crossing permit and will be subject to an annual fee of $500.00.

2. **Occasional Waterway/Routine Methods.**

Utilities that have not been granted the one time permit as described but use the same construction techniques i.e. plowed waterway crossings and provide the same information, should be granted a single permit on a GMU/County basis. Each of these permits shall be considered a consolidated utility crossing permit and will be subject to a fee of $500.00. These projects will require more coordination and time as opposed to those permits that have been approved under 1. above. We would encourage you to work with these applicants in developing the one time permit but would still require the fee on an annual basis.

3. **Waterway/Trenching Methods.**

Utilities or pipeline projects using trenching methods for waterway crossings shall be evaluated on a crossing by crossing basis and require a $300.00 fee for each crossing. These projects will require a permit application and appropriate information for each crossing. However, approvals should be consolidated on a GMU/County basis to minimize paper work.

4. **Wetland/Routine methods.**

Routine utility wetland crossings that include overhead, bored or plowed utility line crossings and provide the information described in 1. above, should be granted water quality certification on a GMU/County basis and are considered a consolidated utility crossing and require a $500.00 fee. We would encourage you to work with these utilities to develop a long term water quality certification that could be automatically renewed on an annual basis but would still require the fee.
5. Wetland/Trenching Methods.

Utilities or pipeline projects using trenching methods for wetland crossings shall be evaluated on a crossing by crossing basis and require a $300.00 fee for each crossing. These projects will require a permit application and appropriate information for each crossing. However, water quality certification approvals should be consolidated on a GMU/County basis to minimize paper work.

If you have any questions please contact either Dale Simon (608)267-9868 or myself (608)264-8554.

CC: Susan Sylvester - AD/5
    Michael Staggs - FH/4
    Michael Cain - LS/5
    Dale Simon - FH/6
    Region Aquatic Habitat Experts
    Water Basin Supervisors
DATE: November 12, 1998


Insert - Chapter 120

TO: Water Regulation Guidebook Holders

FROM: Mary Ellen Vollbrecht - FH/6

SUBJECT: Fees for Utility Water and Wetland Crossings

Please use the following criteria when determining fees for Utility crossing projects.

*Waterway and wetland utility crossings that are installed with a vibratory plow will be charged a $50 fee for each crossing. These projects may be authorized under NR 299 for COE regulated projects or department regulated projects under s. 30.20 Stats.*

Presently our water quality certification conditions for NWP 12 allow us three basic options. Those are:

1) Projects located in calcareous fens, state scientific and natural areas, trout streams including wetlands within 1000 feet, trout lakes and wetlands within 1000 feet and state or federal wild and scenic rivers including wetlands within 1000 feet require individual state water quality certification or denial.

2) Projects located in primary environmental corridors may require individual water quality certification, confirmation of compliance with our conditions, denial or approval by default if we do not respond within 30 days from receipt of a complete application.

3) Projects not identified under 1 or 2 above may require individual water quality certification, confirmation of compliance with our conditions, denial or approval by default if we do not respond within 10 days from receipt of a complete application.

Plowed utility projects subject to s. 30.20, Stats., are presently processed under a simplified permit review process. We will be developing a new form similar to that used for riprap, fords, etc. which will replace the 182.017 Stats., form. In the meantime, use the existing form.

*Consolidated utility waterway crossing projects that are installed with a vibratory plow will be charged a $500 permit fee and are valid for one year. Consolidated utility wetland crossing projects that are installed with a vibratory plow will be charged a $500 water quality certification fee and are valid for one year. These annual permits must be submitted to the department between January 1 and January 30 of each calendar year. Supplemental projects not identified in the annual permit will require a $50 fee for each additional plowed crossing.*

*All other utility crossings installed by open trench excavation in a wetland or waterway require a $300 fee for each crossing. These projects may be authorized under NR 299 for COE regulated projects similar to the procedures described under 1 above or Department regulated projects under s. 30.20 Stats., using our conventional permit process. Projects authorized under s. 30.20, Stats., automatically serve as our water quality certification determination for Corps regulated projects.*
This document is intended solely as guidance and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. This guidance does not establish or affect legal rights or obligations and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.
DATE: August 25, 1999  FILE REF: 8300

TO: Mary Ellen Vollbrecht-FH/3
    Dale Simon-FH/3

FROM: Michael Cain-LS/5.

SUBJECT: Decision in State v. Dwyer Relative to Dredging Projects on Lands Owned by Another
Pursuant to Section 88.90, Stats.

Attached is a copy of the Court of Appeals decision in State v. Dwyer, 91 Wis 2d 440(Ct. App. 1979). This 1979 decision deals with a dredging project that was undertaken by a private individual across DNR lands under s. 88.90, Stats. Based on some recent questions from staff, it was suggested we distribute this to all field staff.

Section 88.90, Stats., allows a person to enter onto the lands of another to dredge "whenever a natural watercourse becomes obstructed through natural causes" if a person's lands are "damaged by the effect which the obstruction has upon the flow of the water...".

The Court of Appeals decision, which was published and has statewide precedential value, outlines a number of important points:

- Dwyer argued that 30.20 didn't apply since he was proceeding under s. 88.90. The Court held that he must also obtain a permit under s. 30.20, stating, "Section 88.90 recognizes the right of a private landowner to protect his property from damage, yet sec. 30.20 recognizes this may not be done at the expense of the public interest in the waters involved."

- Dwyer argued that 30.20 only applies to navigable streams. The Court of Appeals reaffirmed that it applies to both navigable and non-navigable streams.

Attachment
1. Waters §19*-removal of obstruction--construction of statute. Where statute provided that "No person shall remove any material from the bed of any lake or stream not mentioned in one paragraph without first obtaining a permit . . ." and other paragraph referred only to navigable lakes and outlying waters, provision covered nonnavigable lakes and navigable and nonnavigable streams by plain language interpretation, thus it was not necessary to first determine navigability in order to establish that permit requirement applied Stats §30.20 (1) (b)).

2. Statutes §155*--construction-chapter title. Since titles to chapters in statutes may be used to help resolve existing doubt about statute's meaning and may not be used to create doubt, where clear language of statute required permit for dredging nonnavigable streams, there was no need to consider meaning of titles which included only navigable waters.

3. Waters §24*-removal of obstruction-statutory right-permit. Statute providing that owner or occupant of lands damaged by natural obstructions in waterway on land of another may remove obstruction without being charged with trespass did not supersede or waive statute requiring party to first obtain permit from Department of Natural Resources before removing such obstructions, since such statutes protect both interests of individual landowner and public (Stats §§30.20(1)(b), 88.90(3)).

4. Waters §24*-removal of obstruction-permit-injunction propriety. Since statute requires owner or occupant of lands damaged by natural obstructions in waterway to obtain permit before removing such obstructions from waterway on another's land, where defendant did not obtain permit before conducting dredging operations on state lands, defendant was properly enjoined from further dredging, even though obstruction in waterway on state land caused defendant's farmland to be too wet to permit operation of farm equipment.

*See Callaghan's Wisconsin Digest, same topic and section number.

APPEAL from an order of the circuit court for Sheboygan county: DANIEL P. ANDERSON, Judge. Affirmed.

For the appellant, there was a brief and oral argument by Steven O'Meara, O'Meara & Eckert of West Bend.

For the respondent, there was a brief by Bronson C. La Follette, attorney general and Kirbie Knutson, assistant attorney general, with oral argument by Kirbie Knutson.

Before Voss, P.J., Brown, J., and Bode, J.
This case is before the court to review an order dated November 3, 1978 permanently enjoining the defendant, Francis Dwyer, from conducting or contracting for dredging operations on state lands in the upper reaches of the east branch of the Milwaukee River located generally in Sections 17 and 20 of the Town of Mitchell, Sheboygan County, Wisconsin. A full hearing on the matter was held on October 25, 1978 following the issuance on October 24, 1978 of a temporary injunction and an order to show cause why Dwyer should not be permanently enjoined from continuing a dredging operation.

At the hearing, it was determined that Dwyer owns property in Sections 17 and 20 of the Town of Mitchell which abuts the Kettle Moraine State Forest. A stream, which forms the upper reaches of the east branch of the Milwaukee River, is located in the Southeast Quarter of the Southwest Quarter, S17-T14N-R20E, and travels in a generally southerly direction over the Northeast Quarter of the Northwest Quarter, S20-T14N-R20E, where it turns and travels in a southwesterly direction as it crosses into the state forest.

Testimony indicated that the stream is overgrown with vegetation and silted for a distance of about one half mile from where it crosses into the state forest until it passes under the Butler Lake Road. It was undisputed that this condition hampered the drainage of the stream and Dwyer's farmland and that, at the time of the hearing, 129.9 acres of Dwyer's land were too wet to permit the operation of farm equipment.

In 1974, Dwyer sought permission from the State Department of Natural Resources (DNR) to allow him to dredge the stream in this area to form a drainage ditch approximately forty feet wide to improve the drainage of his land. This request was never officially granted or denied.

Walter Adams, the Superintendent of the Kettle Moraine State Forest, Northern Unit, testified that on or about October 19, 1978, he observed a dredging operation on the upper reaches of the stream which he learned was being done at the direction of Dwyer. Dwyer testified that to improve the drainage of his land he contracted to have the stream dredged of vegetation and bottom silt to a width of 13'8" from the bridge to where it entered the state forest. This figure corresponds to the width of the stream at the Butler Lake Road bridge. At the time of the hearing, approximately 2,200 feet had been dredged with all materials being left along the stream bank. These materials included clay and sand from the stream bed as well as silt and bottom sediments.

The court found sec. 88-90 (3), Stats., which permits a person to go upon someone else's land to remove natural obstructions in a watercourse without being liable for trespass, does not waive the requirement of sec. 30.20 (1) (b), Stats., that he obtain a permit from the DNR. It then issued an order granting the permanent injunction.

Dwyer appeals from this order. He argues primarily that sec. 30.20, Stats., gives the DNR jurisdiction only over navigable streams and since no determination on navigability has been made in this case, the permit requirement cannot be said to apply. We disagree.

[1] Section 30.20 (1) (b), Stats., reads, "No person shall remove any material from the bed of any lake or stream not mentioned in par. (a) without first obtaining a permit from the department under sub. (2) (c)." Paragraph (a) refers only to navigable lakes and outlying waters of the state. Therefore, by the plain language of the statute, paragraph (b) must cover non-navigable lakes and navigable and non-navigable streams.

[2] The defendant contends the titles to Chapter 30 and sec. 30.20, Stats., include only navigable waters and, therefore, the permit requirement applies only to navigable lakes and streams. We cannot accept this contention. Such titles are not a part of the statutes. Sec. 990.001 (6), Stats. Furthermore, while a title may be used to help resolve an existing doubt about a statute's meaning, it may not be used to create the doubt. Wisconsin Valley Improvement Co. v. Public Service Commission, 9 Wis.2d 606, 618, 101 N.W.2d 798, 804 (1960). Because the clear language of sec. 30.20(l) (b), Stats., requires a permit for dredging non-navigable streams, there is no need to consider the titles.
Thus, it becomes unimportant whether the stream in question is or is not navigable. The question narrows down to whether see. 88.90 (3), Stats., supersedes see. 30.20 (1) (b), Stats., and allows the removal of natural obstructions from a waterway without a permit.

Section 88.90 (3), Stats., states:

Whenever any natural watercourse becomes obstructed through natural causes, the owner or occupant of any lands damaged by the effect which the obstruction has upon the flow of the water may go upon the land where the obstruction is located and remove it at his own expense. Such person is not guilty of trespass for entry upon the land but is liable for damage caused to crops or structures. The rights and privileges conferred by this subsection also extend to the agents or employes of the person causing the obstruction to be removed.

This statute certainly fits the situation in which Dwyer finds himself. Nevertheless, while the statute protects him from being charged with trespass for going on another's land to remove an obstruction from a waterway, it does not waive other applicable statutory requirements. Section 30.20, Stats., is such a requirement.

The statement of policy and purpose for the DNR with regard to water resources is found in see. 144.025 (1), Stats. In part it states: "The department of natural resources shall serve as the central unit of state government to protect, maintain and improve the quality and management of the waters of the state, ground and surface, public and private." In order to comply with this purpose in the area of dredging lakes and streams, the DNR must have some means to regulate and control such operations. Section 30.20, Stats., provides the needed control.

We do not imply the defendant's dredging of this particular stream is contrary to the public interest. It is not our place to make such a determination initially. However, were we to construe sec. 88.90 (3), Stats., as being totally independent of see. 30.20, Stats., and free of the permit requirement, it would allow dredging to occur at the unfettered discretion of individual property owners. While such discretion might be exercised wisely in most instances, the serious foreseeable harm from possible abuses militate against our adopting that position. The DNR must have some means to oversee necessary, and prohibit harmful, dredging operations.

This does not mean Dwyer cannot under any circumstances dredge the stream. It simply means he must seek the proper permit from the DNR. If the permit is denied, his remedy is then to seek administrative review.

By the Court--Order affirmed.
Utility projects that cross two or more regions have the potential to involve many programs within the Department and thus will be coordinated by central office. Though most of the Department's jurisdiction for these projects falls within the fisheries and habitat protection program, there will likely also be other issues. As such, the environmental analysis and review program will help in coordination of the review.

Often a consultant or prospective applicant will call or write seeking guidance on what will be involved to permit or approve a utility line. Sometimes consultants will be seeking information for use in preparing proposals to act as agents for such projects. At this early stage, the consultants may seek preferences for certain routes from field personnel unfamiliar with the entire project. Department involvement at this stage should be limited to general guidance on permits, data needs for the review, and general requirements.

Later, an applicant will seek actual approval and/or permits to construct a project along a specific route. The permitting stage will necessitate site specific review which may involve Department suggested changes to minimize environmental damage. As a project goes to construction the Department will need to be involved in pre-construction meetings, inspections and enforcement (if necessary).

Coordination of Department involvement in these multi-region utility projects will be from the Central Office. The Bureau of Fisheries and Habitat Protection (FH) will coordinate waterway and wetland crossing reviews; the Bureau of Watershed Management (WT) will coordinate any necessary discharge permits (e.g., trench dewatering, stormwater); the Bureau of Integrated Science Services (SS) will coordinate any input from the Environmental Analysis program; and all endangered species review will be handled by the Bureau of Endangered Resources (BER). SS (EAL Section) in central office will act as the point of contact for the entire project.

Process for Initial Contact/Pre-Application Stage of Involvement:

1. FH or SS will receive the initial contact letter or call from an applicant. Other Department staff that get contacted on a project should refer the person to the central office.
2. SS will put together a response letter (see attachment 1) that explains permit requirements, asks the company for detailed information, and provides the NHI data forms (and/or the NHI email address).
3. The letter will explain the various DNR permit requirements. In appropriate situations, the DNR may be able to issue one general waterway crossing permit for the entire project. The permit will list general and specific conditions including, but not limited to, erosion control specifications, prohibitions for driving vehicles in streams, requirements for pre-construction conferences, timing of construction, provisions for burning slash materials, and provisions for addressing "frac-outs" (directional bore blow-outs). To facilitate the review of the project, DNR will request from the applicant six sets of materials that includes:
• Map of the entire project with a brief description of the overall project and a preliminary construction schedule.
• Detailed map (on USGS 15-minute quadrangle maps) of the proposed route in each county identifying and sequentially numbering (from east to west or north to south) each waterway crossing and each wetland crossing.
• A table that lists: county; crossing number; waterway name (if applicable) and location; wetland location (if applicable); techniques to be used for each crossing (open trench, plow, directional bore, other); and any special information on proposed actions to avoid or minimize impacts to the waterway or wetlands.

4. The letter will explain that a permit fee is required for utility projects traversing public waters and wetlands. If we issue a general permit, the fee will be $1000. If trenching is proposed for any crossing, the permit fee will be an additional $300 for each trench crossing.

5. The applicant will also need to seek review input regarding endangered and threatened species. The initial letter will include a copy of the NHI data request form and an explanation of the costs for NHI review.

Application and Project Review:

1. The application materials will be sent to either FH or SS, who will forward copies to the other. If NHI Request forms are part of the package, SS will forward to BER.

2. Waterway/wetland permitting will be coordinated by FH. The review of waterway crossings will be conducted on a county-by-county basis by field staff. Review information will be transmitted to central office for inclusion in one general permit.

3. For review of the non-waterway sections of a project, Regional EA staff may have to coordinate with other specialists (e.g. real estate, trails, forestry, wildlife managers) to compile information for recommending route changes or construction restrictions. This information should be submitted by the Regional EA staff to the SS central office staff for inclusion in the general permit. All submittals can be via e-mail.

4. ER review of inter-regional projects will be conducted by BER. BER will provide the review information and recommendations to SS staff who will act as the liaison to FH.

5. FH will take the lead in review, will coordinate requests for any additional information and/or will coordinate the final general permit for the project.

Pre-Permitting Review

For some projects, it may be advantageous to provide an initial review of major route alternatives' before getting into actual permitting review. Based on preliminary information provided by an applicant, EA staff can coordinate recommendations and "red flag" analyses to provide comments to the applicant in advance of submittal of the formal permit application. Such effort can help an applicant avoid and minimize potential impacts. If this step is included, Regional EA staff will coordinate input from water management specialists in addition to other specialists in the region. SS will coordinate the actual letter or communication of concerns to the applicant.

Construction Phase Involvement:

The general permit will include conditions for a pre-construction meeting and for establishment of company contact persons. The pre-construction meeting should be attended by any program person that issued permits (in most cases the water management specialist), EA staff, DNR property manager (if DNR land being crossed or affected), and others as appropriate. The company (not the contractor) must establish a responsible person, who will be the primary contact with the Department. For long projects, it may be advantageous to have different contacts for discrete portions of the project.
Inspections will be the primary responsibility of the permit issuer. At the pre-construction meeting (or as a permit condition), DNR may want to ask for regular updates from the primary contact person that list planned activities for the near future. For example, we may want weekly reports as to when waterway crossings will occur, so field staff can plan inspections accordingly. Central office (SS) should receive copies of inspection reports and can coordinate enforcement or other involvement as necessary.

**Annual review of this guidance**
Central office staff will meet annually to discuss how the guidance has worked and to establish changes for the following year. The meeting will involve FH, SS, ER, LE and WT staff. Prior to the meeting, the central office staff will query their regional counterparts for input.
SAMPLE CONTACT LETTER

CONSULTANT OR COMPANY REP
Address
SUBJECT: Fiber Optic Cable

Dear
This letter is in response to your letter (call) of __________ regarding a proposed fiber optic cable line from XXXXXXXXXXXXX to XXXXXXXXXXXXX. Since the proposed project crosses of our Department's regions, coordination of the review will be through the central office in Madison.

Projects of the sort described in your letter may affect waterways, wetlands, important natural areas, public recreation lands, and rare/endangered/threatened and special concern species or communities. Often our concerns relate to impacts from the vehicles used for line placement and erosion/sedimentation impacts associated with any excavation or land clearing work.

State permits or approvals may be required for waterway and/or wetland crossings. We will issue one general waterway/wetland crossing permit for the entire project. The review of waterway crossings will be conducted on a county-by-county basis by field staff in our regional offices with the complete project review coordinated through the central office. The permit will list general and specific conditions including, but not limited to, erosion control specifications, need for a primary contact person during construction and timing for construction activities. Driving vehicles in or across streams is prohibited unless otherwise authorized in the permit.

To facilitate the review of your project, six sets of the required materials must be provided before we can consider the application complete. Please organize the information by county that includes:

1. Map of the entire project for this permit application with a brief description of the overall project.

2. Detailed map of the proposed route in that county identifying and sequentially numbering (from east to west or north to south) each waterway crossing and each wetland crossing.

3. A table that lists: crossing number, waterway name (if applicable) and location; wetland location; technique to be used for crossing (open trench, plow, directional bore, other); and any special information on proposed actions to avoid or minimize impacts to the waterway or wetlands.

Permit fees are required for utility projects traversing public waters and wetlands. The permit fee for one general permit involving multiple waterway and wetland crossings is $1000. If, however, open trenching is proposed for any waterway or wetland crossing, the permit fee will be $300 for each trench crossing.

To facilitate a review of potential impacts to rare/endangered/threatened and special concern species or communities, a submittal of the attached form is required. This information is used by Bureau of Endangered Resources staff to conduct a review using the Natural Heritage Inventory database. The fee is $20 per hour, with a minimum of $60, and the invoices will be sent out upon completion of the review.

In addition to DNR authorities, the project may be subject to Corps of Engineers (COE) jurisdiction, local zoning ordinances and other state authority of the Public Service Commission and the State Historical Society. At a minimum, we suggest you provide a copy of your proposal to the COE and County zoning offices.

Thank you for your inquiry. Please feel free to call with any further questions.
Sincerely yours,

David R. Siebert  
Environmental Analysis and Liaison Section  
Bureau of Integrated Science Services  
(608) 264-6048

Dale Simon  
Rivers and Regulations Section  
Bureau of Fisheries and Habitat Protection  
(608) 267-9868

Attachment (NHI Request Form)
THE STATE OF WISCONSIN APPROVAL PROCESS
FOR DREDGING OF COMMERCIAL PORTS
GUIDANCE FOR APPLICANTS AND WDNR STAFF

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
Scott Hassett, Secretary

Wisconsin Department of Natural Resources  Box 7921  Madison, WI 53707-7921

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February, 2004
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## Acknowledgments:

The collaborative efforts of the Wisconsin Commercial Ports Association (WCPA) are greatly appreciated. Thanks also for the constructive comments from reviewers within the WDNR and the WCPA.

The following WDNR workgroup members were the principal authors of this document.

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- **Paul Koziar**, Bureau of Waste Management
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February 12, 2004

Mr. Dean R. Haen, President
Wisconsin Commercial Ports Association
2561 S. Broadway
Green Bay, WI  54304

Dear Mr. Haen:

I am pleased to transmit the guidance document entitled “The State of Wisconsin Approval Process for Dredging of Commercial Ports” to the Wisconsin Commercial Ports Association (WCPA). This document is the result of an effort by the WCPA and the Wisconsin Department of Natural Resources (WDNR) to improve the process of obtaining approval to complete navigational dredging needed for our commercial ports. As you know, this process began nearly two years ago when your organization contacted us and asked us to work with you and other interested parties on the dredging, disposal and beneficial reuse aspects of navigational dredging projects in Wisconsin. We appreciate the time and effort that your organization put forth.

This step by step guide will improve the process by which commercial ports can apply for approval for dredging projects. In addition, the appointment of a project manager for each commercial port dredging project and the appointment of a regional dredging project coordinator and in each of our Regions with commercial ports will further facilitate the review and approval process.

Enclosed with this letter are 15 copies of this guide for distribution to members of your organization. I am also transmitting this document to staff within the WDNR that are involved in the approval process for navigational dredging. We will have this document available on the WDNR Website.

Thank you for working so closely with us on this effort. We would appreciate continuing dialogue and any feedback as this guidance is implemented. Please contact, Greg Hill, our statewide dredging coordinator, at 608-267-9352 with any questions you may have regarding this transmittal or other dredging issues.

Sincerely,

Scott Hassett, Secretary
Introduction and Purpose

Navigational dredging of sediment at Wisconsin’s 13 major commercial ports is a necessary activity in order to maintain the ability of these facilities to provide a corridor to handle the nearly 40 billion dollars of liquid and dry freight that are essential to the state’s economy. Each year in Wisconsin there’s a need to remove approximately 1 million cubic yards of sediment from our navigational channels. Dredging of this sediment and the management of the material removed requires a major work effort for Wisconsin’s commercial ports.

State law requires the Wisconsin Department of Natural Resources (WDNR) to evaluate the environmental impacts of the dredging of the sediment and grant the necessary permits and approvals before dredging can take place. It is in the best environmental and economic interests of the state to maintain a consistent and timely review process of these dredging projects.

This guidance document is the culmination of nearly two years of workgroup meetings between the Wisconsin Commercial Ports Association and the WDNR to improve the process of obtaining permits and approvals for navigational dredging.

Applicability

This document is intended to cover navigational dredging for shipping cargo and freight in Wisconsin’s commercial ports. It is intended to include dredging in the main navigational channel as well as dredging from the main navigational channel to a particular commercial shipping dock within the commercial port. Although some portions of the guidance (e.g. statewide, regional and project coordinators) are not applicable to other dredging projects, the guidance may prove useful for other projects such as marinas and recreational boating that require the removal of sediment from Wisconsin’s waters. This guidance only describes WDNR state approvals and does not cover any federal or local approvals that may be required for a particular project. This guidance is not directly applicable to U.S. Army Corps of Engineers dredging of commercial ports on the Mississippi River because s. 30.202, Stats., authorizes a separate process under a Memorandum of Understanding (MOU) for disposal of
materials dredged by the Corps of Engineers from the Mississippi, St. Croix and Black rivers. Although this document does not apply directly to dredging projects authorized under s. 30.202, Stats., parts of this guidance may be cited in administration and future revision of the MOU.

Background

In November 2001 the Wisconsin Commercial Ports Association (WCPA) and former WDNR Secretary Darrell Bazzell met to discuss concerns of the WCPA regarding WDNR’s review of applications regarding sediment from dredging of commercial ports. Based upon the discussions at that meeting, WDNR agreed to establish a liaison to interface with the WCPA, to identify a person in each WDNR Region, with a commercial port to serve as the initial point of contact for all dredging projects in that Region. In addition, former Secretary Bazzell agreed to convene a group of Department staff to develop guidance in a workgroup setting with WPCA representatives.

The discussions between WDNR and WCPA representatives resulted in identification of key elements for improving the process of obtaining approval by the WDNR to dredge in Wisconsin’s commercial ports.

Key Elements for an Improved Process

This document describes the step by step process to be used by WDNR staff and dredging project applicants. This step by step process emphasizes certain key elements identified in those discussions between the WDNR, WCPA, and other parties outlined above. These elements include:

1. Early contact of WDNR by applicants, timely and complete submittals of information and applications to WDNR and subsequent timely reviews of dredging requests by WDNR.
2. Effective communication by all parties throughout the process from initial project contact by the applicant to the actual completion of the dredging and disposal or beneficial reuse efforts.
3. A clear understanding of the roles and responsibilities of each of the parties throughout the project.
4. The appointment of a WDNR project manager for each dredging project to ensure coordination of project review across all programs within the WDNR.
5. Documentation of the process for submittal, review, and approval to assure consistency in the review of each project.

Each of these elements is explained in more detail in the step by step process described in the remainder of this guidance.
Flow Chart
The State of Wisconsin Approval Process for Dredging of Commercial Ports

Step 1. Applicant contacts WDNR Regional Coordinator with preliminary description

Step 2. Applicant Submits Preliminary Application to Regional Coordinator. NR 347.05(1)

Step 3. WDNR assigns Project Manager

Step 4. WDNR determines sampling requirements. NR 347.05(2) and NR 347.06

Step 5. Applicant submits sampling and analysis plan.

Step 6. Applicant submits Chapter 30 dredging permit application. s. 30.20, Wis. Stats.

Step 7. Applicant conducts sampling and submits results. NR 347.07(1)

Step 8. WDNR determines what permits and approvals are necessary including WEPA requirement. NR 347.07(2)

Step 9. Applicant submits all necessary approval applications. NR 347.04(1)

Step 10. DNR acts on applicant's requests for approvals and permits. NR 347.04(2)

Step 11. Applicant notifies WDNR and begins dredging. NR 347.08(1)
Step - by - Step Description of the Process
The 11-Step State of Wisconsin Approval Process for Dredging of Commercial Ports

Step 1  Commercial Port Applicant Makes Informal Contact With WDNR Regional Coordinator. This step is strongly encouraged to promote early communication between the applicant and the WDNR. WDNR has assigned an overall coordinator for commercial port dredging projects in each WDNR region that has commercial ports. The regional coordinator has overall cross program coordination responsibility for the commercial port dredging program in that region. See Appendix 2 for a description of the responsibilities of the regional coordinator. This step is intended to be a very informal contact (which may be by telephone) to let the WDNR regional coordinator know that a dredging project will be proposed and that a preliminary application will be forthcoming (Step 2). This contact allows the applicant and the regional coordinator to discuss project timing, proposed disposal or beneficial reuse methods, informational requirements for the preliminary application, and go over any questions.

Step 2  Applicant Submits Preliminary Application Per NR 347.05(1).
S. NR 347.05(1)(a)-(g), Wis. Adm. Code, lists the information that is required for a Preliminary Application. The Preliminary Application should be submitted to the regional coordinator for commercial port projects. The information that is required for a preliminary application includes:

(a) Volume of material to be dredged;
(b) Name of waterbody and location of project;
(c) Brief description of dredging method and equipment;
(d) Brief description of proposed disposal method and location and, if a disposal facility is to be used, size of the disposal facility;
(e) Any previous sediment sampling (including field observations) and analysis data from the area to be dredged or from the proposed disposal site;
(f) Copy of a map showing the area to be dredged, the depth of cut, specific location of the proposed sediment sampling sites and the bathymetry of the area to be dredged; and
(g) Anticipated starting and completion dates of the proposed project.

It's important that all required information is included in the preliminary application so that unnecessary delays are avoided in later steps of the process.
Step 3  WDNR Assigns a Project Manager and Notifies the Commercial Port Applicant.
WDNR will assign a project manager for each dredging project involving a commercial port. The project manager has responsibility for overall cross program coordination within WDNR for all aspects of that particular dredging project. See Appendix 2 for further description of the responsibilities of project managers. WDNR Regions are encouraged to assign a project manager following step 1 if possible, but in any case the expectation is that WDNR should assign a project manager and notify the applicant within 10 business days of receipt of the preliminary application.

Step 4  WDNR Determines Sampling Requirements and the Notifies Applicant Per NR 347.05(2) and NR 347.06. From existing data, WDNR must determine whether there is reason to believe that any sediment contamination exists within the proposed project area. If there is reason for concern about potential contamination, WDNR conducts a coordinated cross-program review and determines all in-situ sediment sampling that will be required. S. NR 347.05(2), Wis. Adm. Code, requires WDNR to notify the applicant of the sampling requirements within 30 business days of receipt of the Preliminary Application submitted in Step 3. This written notification will include a requirement for the submittal of a Sampling and Analysis Plan. Further details about sampling requirements and how WDNR makes decisions regarding sampling are contained in the WDNR internal guidance document entitled "Guidance for Applying Chapter NR 347, Wisconsin Administrative Code, To Dredging Projects In Surface Waters."

Step 5  Applicant Submits and WDNR Reviews the Sampling and Analysis Plan.
If sampling requirements are established in Step 4, the submittal of a Sampling and Analysis Plan will be required. The Sampling and Analysis Plan allows WDNR a review of the sampling proposal for compliance with NR347 requirements prior to the sampling commencing. The expectation is that the WDNR review and response to the Sampling and Analysis Plan will occur very quickly. For commercial port dredging projects, the target for WDNR response is within 10 business days.

Step 6  Applicant Submits the Chapter 30 Dredging Permit Application.
An applicant could delay submittal of the permit application under Chap. 30, Wis. Stats, until being notified of the need for this permit under s. NR 347.07(2), Wis. Adm. Code (Step 8). However, a Chap. 30 dredging permit is always required and submittal of the application at this point is strongly encouraged. An early submittal of the Chapter 30 dredging permit application provides the WDNR with a better understanding of the project and allows a more efficient and expedited project review.

Step 7  Applicant Conducts Sediment Sampling and Submits Sampling Results Per NR 347.07(1).
In accordance with s. NR 347.07(1), Wis. Adm. Code, when the sampling has been completed and the results are available, the applicant submits a copy of the testing report to the WDNR. The sampling report contents are described in NR 347.07(1) and must include the raw data, a map of the project area showing all specific sampling locations, laboratory quality control and quality assurance information including analytical methods, detection limits and quantitation limits. The applicant may submit the Chapter 30 dredging permit application (Step 6) in conjunction with this report if it has not been previously submitted.

Step 8 WDNR Determines What Permits and Approvals are Required and Whether Additional Information is Needed from the Applicant. Based upon the information submitted under Steps 6 and 7, WDNR identifies which of the approvals listed in s. NR 347.04(1) will be necessary for the particular project. In addition, per NR 347.07(2) and (3), WDNR must also determine whether additional information and sampling is necessary. Finally, WDNR must also make a Wisconsin Environmental Policy Act (WEPA) determination under Chap. NR 150 regarding the need for an Environmental Assessment (EA) or an Environmental Impact Statement (EIS). The WDNR determination and the notification to the applicant must be completed within 30 business days of the submittal of the sampling results under Step 7. The applicant should submit any required additional information or sampling results before or at the time of proceeding to Step 9.

See Appendix 3 for descriptions of permits and approvals that may be needed for dredging projects. Also see s. NR 347.07 for a list permits and approvals that may be required.

Step 9 Applicant Submits All Necessary Applications for Permits and Approvals Per NR 347.04(1). Based upon the determinations made in Step 8, the applicant must apply for all necessary WDNR permits and approvals. If the applicant has not already submitted the Chapter 30 dredging permit application under Step 6, he or she must do so as part of this step. Statutory deadlines and processes specific to each permit or approval apply. The WDNR objective is a timely and coordinated cross program review of all applications.

For commercial port projects, the WDNR project manager is responsible for overall coordination and should be contacted and kept informed regarding any problems or questions related to the project. The WDNR project manager should receive copies of all correspondence related to the project and copies of any permits and approvals. Proactive informal communication between the applicant and the WDNR is encouraged so that there are no unexpected delays in the review process.

See Appendix 3 for descriptions of permits and approvals that may be needed for dredging projects. Also see s. NR 347.07 for a list of permits and approvals that may be required.
Step 10  WDNR Makes Approval and Permit Determinations and Notifies Applicant Per NR 347.04(2). WDNR prepares an NR 150 environmental review document if required and issues decisions for each application submitted under Steps 6 and 9. Statutory deadlines and processes specific to each permit or approval apply. Except as otherwise provided by law, the WDNR decisions on permits and approvals should be made concurrently with the NR 299 Water Quality Certification or the permit under Chap. 30, Wis. Stats. per NR 347.07(2). An opportunity for a public hearing(s) or public informational meeting may be required during this step before the WDNR can issue some types of permits or approvals.

Step 11  Applicant Notifies WDNR Per NR 347.08(1) and Begins Dredging. After all permits and approvals are granted, the applicant is required under NR 347.08(1) to notify the WDNR at least 5 days prior to the time that dredging is to begin.
Appendix 1

Chapter NR 347, Wis. Adm. Code

Unofficial Text (See Printed Volume). Current through date and Register shown on Title Page.
Register, January, 2002, No. 553

Chapter NR 347

SEDIMENT SAMPLING AND ANALYSIS, MONITORING PROTOCOL AND DISPOSAL CRITERIA FOR DREDGING PROJECTS

NR 347.01 Purpose and policy. (1) The purpose of this chapter is to protect the public rights and interest in the waters of the state by specifying definitions, sediment sampling and analysis requirements, disposal criteria and monitoring requirements for dredging projects regulated under one or more of the following statutes: s. 30.20, Stats., which requires a contract or permit for the removal of material from the beds of waterways; s. 281.41, Stats., which establishes a wastewater treatment facility plan approval program; ch. 289, Stats., which establishes the solid waste management program; ch. 291, Stats., which establishes the hazardous waste program; and ch. 283, Stats., which establishes the Wisconsin pollutant discharge elimination system (WPDES) program.

(2) It is department policy to encourage reuse of dredged material and to minimize environmental harm resulting from a dredging project.

History: Cr. Register, February, 1989, No. 398, eff. 3–1–89; corrections in (1) made under s. 13.93 (2m) (b) 7., Stats., Register January 2002 No. 553.

NR 347.02 Applicability. The provisions of this chapter apply to the removal and disposal of material from the beds of waterways except where exempted by statute.

History: Cr. Register, February, 1989, No. 398, eff. 3–1–89.

NR 347.03 Definitions. (1) “Analyte” means the chemical substance or physical property being tested for in a sample.

(2) “Bathymetry” means the measurement of depth of water in lakes or rivers to determine lake or river bed topography.

(3) “Beach nourishment disposal” means the disposal of dredged material on the beaches or in the water landward from the ordinary high-water mark of Lakes Michigan and Superior for the purpose of adding, replenishing or preventing erosion of beach material.

(4) “Bioassay” means a method for determining the acute or chronic toxicity of a material by studying its effects on test organisms under controlled conditions.

(5) “Bulk sediment analysis” means a test to measure the total concentration of a specific constituent in a sample being analyzed.

(6) “Carriage water” means the water portion of a slurry of water and dredged material.

(7) “Carriage water return flow” means the carriage water which is returned to a receiving water after separation of the dredged material from the carriage water in a disposal, rehandling or treatment facility.

(8) “Connecting waterways” means a portion of a navigable lake or stream which is directly joined to Lake Michigan or Lake Superior and which contains a navigation channel providing access for commercial or recreational watercraft to Lake Michigan or Lake Superior.

(9) “Contamination” means a solid, liquid or gaseous material, microorganism, noise, heat, odor, or radiation, alone or in any combination, that may harm the quality of the environment in any way.

(10) “Contract” means a binding written agreement between the department and a dredging applicant authorizing the removal of material from the bed of a natural navigable lake or outlying water.

(11) “Department” means the department of natural resources.

(12) “Disposal facility” means a site or facility for the disposal of dredged material.

(13) “Dredged material” means any material removed from the bed of any waterway by dredging.
(14) “Dredging” means any part of the process of the removal of material from the beds of waterways; transport of the material to a disposal, rehandling or treatment facility; treatment of the material; discharge of carriage or interstitial water; and disposal of the material.

(15) “Grain size analysis” means a method to determine dredged material and disposal site sediment particle size distribution.

(16) “Hazardous waste”, as defined in s. 291.01 (7), Stats., means any solid waste identified as a hazardous waste under ch. NR 605.

(17) “Interstitial water” means water contained in the interstices or voids of soil or rock in the dredged material.

(18) “Limit of detection” means the lowest concentration level that can be determined to be statistically different from a k sample for that analytical test method and sample matrix.

(19) “Limit of quantitation” (LOQ) means the concentration of an analyte at which one can state with a stated degree of confidence for that analytical test method and sample matrix that analyte is present at a specific concentration in the sample tested.

(20) “Parent material” means the native unconsolidated material which overlies the bedrock.

(21) “PCBs” means those materials defined in s. 299.45 (1), Stats.

(22) “Particle size distribution” means a cumulative frequency distribution or frequency distribution of percentages of particles of specified diameters in a sample.

(23) “Rehandling facility” means a temporary storage site or facility used during the transportation of dredged material to a treatment or disposal facility.

(24) “Treatment facility” in this chapter means a natural or artificial confinement facility used for the separation of dredged material solids from the interstitial or carriage water.

(25) “Upland disposal” means the disposal of dredged materials landward from the ordinary high-water mark of a waterway or waterbody.

NR 347.04 Permits, approvals and reviews required. (1) The following are the permit, approval and review requirements for dredging projects:

(a) Except where otherwise provided by law, all private and municipal dredging projects require a permit or contract under s. 30.20, Stats., and ch. NR 346. Dredging in portions of the Mississippi, St. Croix and Black rivers by the U.S. army corps of engineers is governed by s. 30.202, Stats.

(b) All dredging projects require review under ch. 289, Stats., and chs. NR 500 to 520 for disposal of dredged material under the solid waste management program.

(c) All dredging projects shall be reviewed under ss. 1.11 and 23.11(5), Stats., and ch. NR 150 for compliance with the Wisconsin environmental policy act.

(d) All federally funded, permitted or sponsored dredging projects require water quality certification under ss. 281.11 to 281.22 and 283.001, Stats., and ch. NR 299.

(e) A Wisconsin pollutant discharge elimination system (WPDES) permit under ch. 283, Stats., is required for dredging projects with carriage water return flows to surface water or groundwater.

(f) Plan approval under s. 281.41, Stats., is required for dredging projects which include a dredged material treatment facility.

(g) Sites and facilities for the disposal of hazardous waste and PCBs require review under subch. IV of ch. 291, Stats. and chs. NR 500 to 520 and 600 to 685.

(2) The project application process shall be coordinated by the department. Except as otherwise provided by law, decisions on all applicable department approvals, permits, contracts and licenses relating to a dredging project shall be made concurrently and with the decision on:

(a) Water quality certification under ch. NR 299 for all federally funded, permitted or sponsored projects, or

(b) Permit or contract under s. 30.20, Stats., and ch. NR 346 for all other projects.

History: Cr. Register, February, 1989, No. 398, eff. 3–1–89; corrections in (1) made under s. 13.93 (2m) (b) 7., Stats., Register, October, 1995, No. 478.; corrections in (1) (b), (d), (e), (f), and (g) made under s. 13.93 (2m) (b) 7., Stats., Register January 2002 No. 553.

NR 347.05 Preliminary application and analytical requirements. (1) Prior to submission of a formal application, anyone seeking to remove material from the beds of waterways shall provide the department with preliminary information including:

(a) Name of waterbody and location of project;

(b) Volume of material to be dredged;

(c) Brief description of dredging method and equipment;

(d) Brief description of proposed disposal method and location and, if a disposal facility is to be used, size of the disposal facility;

(e) Any previous sediment sampling (including field observations) and analysis data from the area to be dredged or from the proposed disposal site;

(f) Copy of a map showing the area to be dredged, the depth of cut, the specific location of the proposed sediment sampling sites and the bathymetry of the area to be dredged; and

(g) Anticipated starting and completion dates of the proposed project.

(2) An initial evaluation shall be conducted by the department within 30 business days after receipt of the information under sub. (1) to determine if there is reason to believe that the material proposed to be dredged is contaminated. This initial evaluation shall be used by the department in specifying sediment sampling and analysis requirements to the applicant under s. NR 347.06 and shall be accomplished with existing data. Factors which shall be considered by the department in its evaluation of the dredging site and, if appropriate the disposal site, include, but are not limited to, the following:

(a) Potential that contaminants may be present. Potential routes that may have introduced contaminants into the dredging site shall be identified by examining appropriate maps, aerial photographs, or other graphic materials that show surface water-courses and groundwater flow patterns, surface relief, proximity to surface and groundwater movement, private and public roads, location of buildings,
NR 347.06 Sampling and analysis. Upon completion of the initial evaluation, the department shall establish sampling and analysis requirements.

(1) EXCEPTION. Except as provided in subs. (3)(a) and (6), the applicant shall collect and analyze data on sediments to be dredged in the manner outlined in this section.

(2) CORRECT METHODS. Unless otherwise specified, sampling, sample handling and sample analysis to demonstrate compliance with this section shall be in accordance with methods from applicable sources enumerated in ch. NR 149.

(3) NUMBER OF SAMPLES. (a) Sediment sampling may be waived by the department if it determines from its review of available information under s. NR 347.05(2) that sediment contamination is unlikely.

(b) If available information is either insufficient to determine the possibility for sediment contamination, or shows a possibility for sediment contamination, the department shall require the applicant to collect sufficient samples to describe the chemical, physical and biological properties of the sediment. The exact number and location of sediment samples required and analyses to be conducted shall be specified by the department, in consultation with the applicant, based on the initial evaluation and on other factors including, but not limited to, the potential for contamination, volume and aerial extent of material to be dredged, depth of cut and proposed method of disposal.

(c) For a project involving the disposal of dredged material at an upland disposal site, the department may require samples to be taken from the proposed disposal site and analyzed for parameters found to be elevated in the dredged material sediment samples. The number and location of disposal site samples required shall be specified by the department based on the size and other characteristics of the site.

(d) For a project to be conducted in the Great Lakes with beach nourishment disposal, at least one sample every 250 linear feet of beach with a minimum of 2 samples shall be taken from the proposed beach nourishment disposal site and analyzed for particle size and color. Core or grab samplers may be used.

(4) METHOD OF TAKING SAMPLES. (a) All samples shall be taken with a core sampler except as provided in sub. (3)(d). The department may approve other sampling methods if it finds them to be appropriate.

(b) All sampling equipment shall be properly cleaned prior to and following each sample collection.

(c) Samples collected for PCB, pesticide and other organic analyses shall be collected and processed using metallic (stainless steel preferred) liners, tubs, spoons and spatulas. Samples collected for other chemical analysis, including heavy metals, shall be collected and processed using non–metallic liners, tubs, spoons and spatulas.

(d) Core samples from the dredging site shall be taken to the proposed dredging depth plus 2 feet.

(e) Core samples shall be visually inspected for the existence of strata formation, and a written description including position, length, odor, texture and color of the strata shall be provided to the department.

(5) SAMPLE HANDLING AFTER COLLECTION AND PRIOR TO ANALYSIS. Sample handling and storage prior to analysis shall be in accordance with the maximum holding times and container types given in table F of ch. NR 219. Samples shall be preserved at the time of collection by cooling to 4°C.

(6) ANALYSES TO BE PERFORMED ON SEDIMENT SAMPLES. Analyses shall be done in accordance with methods from applicable sources enumerated in ch. NR 149. Analyses submitted to the department under this chapter shall be done by a laboratory certified or registered under ch. NR 149.

(a) Samples shall be analyzed from each distinct layer observed in the material to be dredged. If no strata formation exists, core samples shall be divided into 2–foot segments, and each segment shall be analyzed for the required chemicals and characteristics. For cores extending into parent material, analysis of only the top 2–foot segment of parent material is required. The department may approve other subsampling methods if it finds them to be appropriate.

(b) All samples shall be analyzed for those parameters listed in table 1 unless waived by the department as provided in par. (d). Elutriate testing may be required for all chemicals listed in Table 1 unless waived by the department as provided in par. (d).

(c) If previous sampling data or other adequate available information indicates the possibility of contamination by chemicals not listed in table 1, the department may require analysis for those chemicals.

(d) If previous sampling data or other adequate available information demonstrates that the possibility of contamination is negligible, analysis for any chemical may be waived, in writing, by the department.

(e) The department may require additional samples and analyses as specified by law or for other appropriate reasons.

TABLE 1
ANALYSES TO BE PERFORMED ON SEDIMENT SAMPLES

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<tr>
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<tr>
<td>Settleability</td>
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(if return water)

History: Cr. Register, February, 1989, No. 398, eff. 3–1–89; am. (5) and (6) (intro.), Register, November, 1992, No. 443, eff. 12–1–92.

NR 347.07 Review procedures and review criteria.

(1) When sediment sampling and analyses have been completed, the applicant shall submit a copy of the testing report to the department. This report shall include raw data for all analyses, a map of the project area showing the specific locations of sediment sampling sites and the name and address of the laboratory which performed the tests. All testing and quality control procedures shall be described and analytical methods, detection limits and quantification limits shall be identified.

(2) The department shall review the information submitted under sub. (1) within 30 business days after receipt and determine the applicable statutory and administrative rule provisions and any additional information required from the applicant under this section.

(3) Based on the submitted testing report the department may after consultation with the applicant require additional sediment sampling and analyses when there is evidence of contamination.

(4) For projects in the Great Lakes involving beach nourishment disposal, grain–size analysis results of the proposed dredged material and the beach shall be compared by the department.

(a) The department may allow beach nourishment disposal if:

1. The average percentage of silt plus clay (material passing a #200 sieve or less than .074 mm dia.) in the dredged material does not exceed the average percentage of silt plus clay in the existing beach by more than 15% and the color of the dredged material does not differ significantly from the color of the beach material.

Note: For example, if the silt plus clay content of the existing beach is 10%, suitable dredged material must have a silt plus clay content of less than 25%.

2. The criteria of any general permit regulating wastewater discharges under the Wisconsin pollutant discharge elimination system is not exceeded.
(5) For all projects where upland disposal is required or planned, the results of sediment sampling and analysis shall be compared by the department to the solid waste disposal standards and criteria specified in chs. NR 500 to 520.

(6) If the bulk sediment analysis criteria in sub. (4) is exceeded, the applicant shall have the option of demonstrating to the department through use of bioassay, or other methods approved by the department, that the dredging and sediment disposal operations will have minimum effects on the environment.

History: Cr. Register, February, 1989, No. 398, eff. 3–1–89; correction in (5) made under s. 13.93 (2m) (b) 7., Stats., Register, October, 1995, No. 478.

NR 347.08 Monitoring, reporting and enforcement.

(1) Surveillance. (a) The permittee shall contact the department 5 business days prior to the commencement of dredging to provide an opportunity for the department to review all required environmental safeguards to ensure they are in place and operable.

(b) The department may inspect the dredging project at any time during operation to determine whether requirements of permits and approvals are being met or to conduct effluent sampling.

(2) Monitoring. (a) For those projects authorized in part by a WPDES permit, monitoring, analyses and reporting shall be performed as specified in the WPDES permit.

(b) For all other projects, monitoring, analyses and reporting shall be performed as specified in ss. NR 347.06(2) and 347.07(1).

(c) Project characteristics to be monitored may include, but are not limited to, carriage water return flow, total suspended solids, dissolved oxygen concentrations, effluent and receiving water temperatures, receiving stream flow rates, effluent ammonia–nitrogen concentrations, and pH.

(3) Suspension of work. If the department determines that project performance is not in compliance with permit or contract conditions, the permittee shall suspend work upon written notification from the department. This shall be a condition of any permit or contract issued by the department. The permittee shall be accorded an opportunity for hearing in accordance with s. 227.51(3), Stats. The issuance of a suspension order under this subsection shall not limit other enforcement actions or penalties. The department and permittee shall analyze operational deficiencies and the department shall prescribe changes necessary to bring project operation into conformance with permit or contract conditions.

(4) Penalties. (a) Each violation of the conditions of a permit or contract issued under s. 30.20, Stats., or this chapter, may result in a forfeiture of not less than $100 nor more than $10,000 for the first offense and shall forfeit not less than $500 nor more than $10,000 upon conviction of the same offense a second or subsequent time. The permit or contract may be rescinded and appropriate restoration orders may be issued as authorized by ss. 23.79, 30.03, 30.12, 30.15, 30.20, 30.292, 30.294 and 30.298, Stats.

(b) The enforcement provisions of s. 283.91, Stats., shall apply to any violations of WPDES permits associated with dredging projects.

(c) The enforcement provisions of ss. 289.97 and 299.97, Stats., and chs. NR 500 to 520 shall apply to violations of solid waste management approvals for this chapter.

(d) The enforcement provisions of ss. 291.95 and 291.97, Stats., shall apply to violations of any hazardous waste approvals for disposal activities associated with dredging projects authorized by this chapter.

History: Cr. Register, February, 1989, No. 398, eff. 3–1–89; corrections in (4) made under s. 13.93 (2m) (b) 7., Stats., Register, October, 1995, No. 478; corrections in (4) (b) to (d) made under s. 13.93 (2m) (b) 7., Stats., Register January 2002 No.
Appendix 2

WDNR Staff Roles and Responsibilities for Commercial Port Dredging Projects

1) Statewide Coordinator
The WCPA has requested that the WDNR name an overall statewide coordinator for commercial port dredging projects. The role of the statewide coordinator is:
- To assure consistency in implementation of WDNR policy and guidance;
- To serve as liaison with the WCPA on statewide issues related to commercial ports dredging projects;
- To communicate and coordinate across WDNR program lines statewide commercial port dredging issues; and
- To represent the WDNR in interactions with federal agencies and other states.
The statewide coordinator should be consulted on statewide cross program issues, on issues related to consistency between regions, or on implementation of statewide policy.

Note: As of the date of publication of this guidance, Greg Hill is the designated Statewide Coordinator for commercial port dredging projects. Contact: Greg Hill; Greg.Hill@dnr.state.wi.us  608-267-9352.

2) Regional Coordinators
At the request of WCPA, the WDNR has named a regional coordinator for commercial port dredging for each WDNR region with commercial ports. The responsibility of the regional coordinator is to assure consistency and cross-program coordination on commercial port dredging issues within that WDNR region and to represent the region on statewide issues. The regional coordinator should be the initial point of contact before a project manager is named for a particular project. The regional coordinator may also be contacted if there is a question or dispute that cannot be resolved with the project manager.

The regional coordinator will contact the regional Water Leader and the regional Air and Waste (AW) Leader within that WDNR region when there is a need for a project manager to be named. The regional coordinator may recommend the name of a project coordinator to the regional AW and Water leaders.

Note: As of the date of this publication, the following persons were designated as a Regional Coordinator for commercial port dredging projects.

Northern Region: Duane Lahti, NOR Watershed Management Program
Duane.Lahti@dnr.state.wi.us  715-395-6911

Southeast Region: Rob Grosch, SER Waste Management Program
Robert.Grosch@dnr.state.wi.us  262-574-2148

Northeast Region: Kristy Rogers, NER Aquatic Habitat Coordinator
3) Project Managers
Whenever a commercial port dredging project is proposed, the WDNR Region will name a project manager for that project and inform the applicant within 10 days of receipt of the preliminary dredging application (Step 3 of the 11-step process). The project manager's role is cross-program coordination and communication on all aspects of the proposed project. The project manager is the principal liaison between the applicant and the WDNR. When approvals or permits are needed, direct communication between the applicant and the lead WDNR reviewer for a particular permit or approval is encouraged, however the project manager should receive copies of all correspondence and should be kept fully informed and appraised of communications and progress on the project.
Appendix 3

Descriptions of Permits, Approvals and Other Requirements That May Apply to Dredging Projects

A. Chapter 30 Dredging Permits.

All projects that involve dredging or removing bottom material from the bed of a waterway require a Dredging Permit under section 30.20, Wisconsin Statutes. Applicants submit preliminary plans that show the location, extent and volume of proposed dredging, along with the proposed disposal site or beneficial reuse option. DNR staff identify any sediment sampling requirements needed to determine if the sediment is contaminated, and the applicant conducts sampling. When a final permit application is received, DNR staff evaluate the impacts of proposed dredging and disposal on wetlands, fish and wildlife habitat, and on other public rights in navigable waters, including navigation. If the project involves 3000 cubic yards or greater of material to be dredged, DNR prepares an Environmental Assessment to evaluate the project in greater detail. A Dredging Permit is granted if DNR determines that the work can be done, perhaps with certain permit conditions, in a manner that will not harm public rights in Wisconsin waters.

B. Wastewater Treatment Facility Plan Review

If a dredging project includes a dredged material treatment facility, the facility may not be constructed or operated unless the plans and specifications for the proposed facility have been reviewed and approved by the WDNR. Procedures for submission of plans and specifications for wastewater treatment facilities are contained in Chapter NR 108, Wis. Adm. Code. According to s. 281.41(1)(b), Wis. Stats., the WDNR must review and approve or deny the plans and specifications within 90 days following their receipt.

C. WPDES - Wastewater Discharge Permits.

A Wisconsin Pollutant Discharge Elimination System (WPDES) wastewater discharge permit is required under Chapter 283, Wis. Stats., and Chapter NR 200, Wis. Adm. Code, for a point source discharge of pollutants into the waters of the state. Wastewater discharge permits are applicable to dredging operations that discharge carriage and/or interstitial water, and small amounts of the dredged material resulting from the disposal or temporary storage.

General WPDES Permit

General Permit. In some cases, the removed sediment is essentially innocuous. Consequently, any return of water and small amounts of the dredged material from the
disposal site to waters of the state are also innocuous and can be covered by a Dredging Operations general permit (WPDES Permit No. WI-0046558-3).

Provisions have been included in the General Permit for the disposal of dredged sediments in Lake Michigan and Lake Superior via beach nourishment and unconfined disposal. These activities are defined as follows:

**Beach nourishment:** The disposal of dredged material on the beaches or in the water landward from the highwater mark of Lakes Michigan and Superior for the purpose of adding, replenishing or preventing erosion of beach material.

**Unconfined disposal:** The deposition of dredged sediments, in water, on the bed of a waterway. Typically, state law prohibits disposal of dredged sediments via unconfined disposal. However, unconfined disposal may be allowed where the lake bed in the dredged disposal area has been granted to a local government entity. See Sections 30.12(1), 30.202, 30.203, and 30.11, Stats.

Disposal via these means is allowed only if the following two conditions are met: the particle size of the dredged material must meet the requirements of s. NR 347.07(4)(a)1, Wis. Adm. Code and the dredged material must meet the background criteria for uncontaminated sediment identified in the General Permit - WPDES Permit No. WI-0046558-3.

**Specific WPDES Permit**

**Specific WPDES Permit.** A Specific Permit is necessary in situations where there exists a possibility of violating surface or groundwater quality standards (NR 102, 105, 106, and 140). For situations where specialized environmental controls are necessary the discharge will be regulated by a specific permit. In general if bioaccumulating compounds are present, regulation of these substances requires a specific permit. Discharges to outstanding and exceptional resource waters requires a specific permit which provides the oversight and discharge limitations necessary to protect these types of receiving waters.

**D. NR 299 Water Quality Certification**

Chapter 299, Wis. Adm. Code, contains procedures and criteria for application, processing and review of water quality certifications required by the Federal Water Pollution Control Act. A water quality certification is required for any federally funded, permitted or sponsored dredging project.

**E. NR 500 Solid Waste Regulation and Approvals**

Dredged material is considered a solid waste under Wisconsin statutes and case law. As explained below, however, disposal of most dredged material is exempted from normal solid
waste regulation by the WDNR’s Waste Management Program (s. 289.43(8), Wis. Stats, and s. NR 500.08(3), Wis. Adm. Code).

Wisconsin’s solid waste statutes (Ch. 289, Wis. Stats.) and regulatory codes (chs. NR 500 through NR 520, Wis. Adm. Code) are primarily directed at the regulation of complex land disposal facilities, also referred to as solid waste landfills. Dredged material disposal sites can be regulated in a manner similar to landfills; however, most are exempted from solid waste program regulation by rule or on a case-by-case basis. Projects likely to be subject to formal regulation are those that include large volumes of dredged material, contaminated dredged material, engineered structures, or those proximate to a protected resource such as wetlands.

Dredged Material Wastes Exempt by Rule

S. NR 500.08(3), Wis. Adm. Code, lists several types of facilities for disposal of non-contaminated dredged material which are exempted by rule. For those facilities that qualify for this exemption, any Department requirements for disposal would be exercised through the dredging permit. Formal solid waste regulation would not be invoked, as long as the disposal site complied with performance standards of s. NR 504.04(4), Wis. Adm. Code. This exemption by rule is based on certain presumptions about the environmental impact of projects. Where the WDNR has enough information to judge that the sediment is not contaminated or where disposal will not cause problems, the exemption by rule can apply.

The NR 500.08(3) exemption by rule does not apply to volumes of 3,000 cubic yards or greater from the Great Lakes, the Mississippi River and certain water bodies where historical contamination or a large number of dischargers existed or is still present. The exemption by rule also does not apply if the WDNR has reason to believe that the performance standards of s. NR 504.04(4), Wis. Adm. Code would be violated.

Dredged Material Wastes Exempt Following Case-by-Case Review

According to s. 289.43(8), Wis. Stats., the WDNR can exempt certain solid waste facilities from the licensed landfill siting process on a case-by-case basis. The applicant still has to demonstrate that the project will not cause violations of standards or threaten protected resources, like groundwater quality, surface water quality, wetland functional values, critical habitat, or endangered species.

The intent of this statute is to allow the applicant to tailor the design, active life, closure, etc., of the disposal facility to the size and requirements of the dredging project. The exemption can require a facility design with any type containment needed, ranging from filling a depression in the landscape to an engineered design with a liner, leachate collection, and final cover similar to a licensed landfill.

An applicant has to prepare a plan and submit an application to the WDNR for case-by-case review. The WDNR recommends that the following items to be included as part of a request for a grant of exemption:

- de-water dredged material as much as possible to allow for proper placement.
- disposal in an upland location that is not a wetland, critical habitat area, recharge area for private or public water supply wells
- confine to as limited an area as practicable
- confine to as limited a volume as practicable
- cover with soil if necessary to prevent erosion and direct contact. (Thicker cover (1 to 3 feet) may be necessary if there is greater concern for contact.)
- post-dredging reporting to the WDNR to document the disposal location, cover, volume used, changes made, etc.

It is also possible that the WDNR would require a greater degree of containment or isolation due to higher contaminant concentrations, greater concern about toxicity or leaching of certain types of contaminants or other factors. Early discussion with WDNR staff will help to define degree of containment that has to be designed for.

Public Meeting Required for Solid Waste Decisions

Before a formal solid waste approval can be issued, s. 289.54, Wis. Stats., requires the WDNR to hold a public meeting in the city, village or town where disposal of dredged material is proposed to take place. The statute specifically states that this is applicable to any dredged material that contains PCBs or heavy metals in concentrations of less than 50 ppm. Given that dredged material will show a range of concentrations, the effect of this statute is to require a public meeting prior to issuing a Waste Management program approval for any dredged material disposal project. At these meetings, the Department will expect the applicant to present an overview of the proposal. Comments will be recorded and considered for utility in the approval requirements. If the dredged material is determined to be exempt from solid waste regulation (either by rule or on a case-by-case basis), then no public meeting is required.

Beneficial Reuse of Dredged Materials

According to s. NR 500.08(5), Wis. Adm. Code, the WDNR may grant exemptions from normal solid waste regulatory requirements for the purpose of allowing or encouraging the recycling of solid wastes. While there is no specific beneficial reuse code applicable to dredged material, s. NR 347.01(2) states the WDNR policy of encouraging the beneficial reuse of dredged materials. Beneficial reuse can be addressed under the dredging permit, for projects which are eligible for the code exemption under s. NR 500.08(3), or by a case-by-case low hazard exemption under s. 289.43(8), Wis. Stats.

In support of the WDNR's policy to encourage beneficial reuse projects, the WDNR is a member of the Great Lakes Dredging Team and contributes to the beneficial reuse initiative and guidance documents developed by that Team (see www.glc.org/dredging). Examples of a beneficial reuse projects include landfill cover as approved in a Plan of Operation, habit creation, beach nourishment, construction fill materials, and soil amendment.

Landspreding of Dredged Materials
This alternative is not commonly used and is probably most applicable to inland lake dredging projects with highly organic, mucky sediments which can be easily removed and land-applied by hydraulic pumping. At a minimum, it has to be shown that the use of the dredged material will cause no harm or additional contamination. For landspreading proposals, it is desirable to be able to demonstrate a benefit for the intended use of the land.

There are two possible WDNR Waste Management regulatory approaches for landspreading projects. 

A landspreading plan can be accepted and reviewed under Chap. NR 518, Wis. Adm. Code. This is most applicable to repetitive dredging actions. Code requirements are similar to the information required for land application of municipal treatment plant sludge. A formal approval will be issued following one step review process. No solid waste license is required but plan review fees are listed in Chap. NR 520, Wis. Adm. Code. The dredged material would have to be characterized, and appropriate land application limits would have to be defined on a case-by-case basis.

Land application can also be allowed under the low hazard case-by-case grant of exemption under s. 289.43(8), Wis. Stats. This approach is more appropriate for one-time dredging actions.

Approval to Dispose of Dredged Materials in an Existing Landfill

Disposal of dredged material in an existing licensed solid waste landfill involves relatively little direct interaction with the Department but does require negotiations with the landfill operator. A landfill that does not already have an approval to accept dredged material would have to submit a modification to its plan of operation to the WDNR.

Landfill disposal is not a popular choice for dredged material that is considered to be uncontaminated, but it may be the most practical choice for smaller dredging projects dealing with contaminated dredged material. In some instances, the landfill operator can use dredged material for certain landfill construction purposes.

Approval of a New Landfill for Dredged Materials

For dredged material that is not eligible for the code-based or a case-by-case exemption, disposal in a dedicated licensed landfill is possible. The applicant would have to follow the licensed landfill siting process in ch. 289, Stats., and chs. NR 500 to NR 520, Wis. Adm. Code. This process is well defined, but highly intensive in terms of demands on time and resources. It can take 3 to 7 years to complete.

Historically, there have been few efforts to site licensed landfills solely for dredged material, and none of those efforts were pushed to completion. This alternative is most likely for projects involving large volumes of contaminated sediment, to be dredged over a time span of several years.
Approval to Dispose of PCB-Containing Dredged Material

Some of Wisconsin’s waterways have been contaminated with PCBs. The alternatives for disposal of dredged material from those waterways can be subject to different regulatory requirements.

Sediment with PCB concentrations of less than 50 ppm would be regulated as a solid waste under WDNR authority, including Chaps. NR 157 and NR 500 to NR 520, Wis. Adm. Code. Sediment material contaminated by PCBs is usually not eligible for a low hazard exemption unless the concentrations are very low. For higher concentrations, disposal in a licensed landfill is normally required. For lower PCB concentrations, a range of disposal and beneficial reuse options should be considered on a case-by-case basis whether or not the material is deemed eligible for a low hazard exemption. Please refer to Guidance for Landspreading of PCB-Contaminated Solid Wastes - WA-39 for further information regarding landspreading of sediment materials containing PCBs.

Sediment with PCB concentrations of 50 ppm or greater is also regulated under federal law - in the Toxic Substances Control Act (TSCA). Applicants for TSCA-regulated dredged material are advised to dispose of it at an established commercial toxic/hazardous waste landfill rather than attempting to establish their own facility. The process of establishing a new TSCA-approved waste landfill would be at least as laborious as establishing a new solid waste landfill, and probably more so.

TSCA also allows use of a mechanism called the TSCA coordinated approval. This involves WDNR working with USEPA Region 5 on review of an application to dispose of TSCA-level PCB-contaminated dredged material in a Wisconsin licensed solid waste landfill. The possibility of disposing of waste in a landfill that wasn't specifically designed under TSCA requirements is based on the level of engineering and construction oversight that the NR 500 to 520 codes require. Proposed plans by the applicant and the WDNR’s review would have to meet certain additional requirements that USEPA Region 5 would expect to see addressed.

Disposal in a Confined Disposal Facility

Historically, a dredged material facility that has been constructed by the US Army Corps of Engineers (Corps) within the ordinary high water mark of a water body has been termed a "confined disposal facility" (CDF). This type of disposal is subject to agreements between local sponsor (municipality) and the Corps. The applicant for any new CDF would have to demonstrate that the facility is eligible for a low hazard exemption under s. 289.43(8), Wis. Stats. In that case, there would be no licensing or other requirements by the Waste Program under the landfill siting laws. However, there would be specific requirements in WPDES permits for the facility. With existing CDFs, the WDNR's Waste Program has been largely concerned with closure plans once the facility has filled to capacity.

F. NR 150 Environmental Impact Determination

According to the Wisconsin Environmental Policy Act (s. 1.11, Wis. Stats.), all state agencies, including the WDNR, must evaluate and be aware of the environmental consequences of their
regulatory, management or administrative actions. Section NR 150.03, Wis. Adm. Code, establishes a "Type List" which categorizes WDNR actions. For dredging projects, each WDNR action on a permit or approval would be categorized from the NR 150.03 Type List and there would be an opportunity for public input.

For a dredging permit under s. 30.20, Wis. Stats., the following would be considered a Type II action: 1) over 3000 cubic yards being dredged, 2) a potential for sediments characterized as a hazardous substance and involving more that 7 cubic yards being dredged, or 3) draining or filling of wetlands affecting more than five acres. Type II actions require the preparation of an Environmental Assessment (EA) and may require the preparation of an Environmental Impact Report (EIR). If the proposed action is determined to be a "major action significantly affecting the quality of the human environment," an Environmental Impact Statement (EIS) will be required.

(Note Regarding Appendix 3: This appendix contains a summary of WDNR requirements that may be applicable to dredging projects for commercial ports. This is not a complete listing of all state, federal and local requirements that could be applicable to a dredging project. See the legal notice and disclaimer on page 2 of this publication.)
GUIDANCE PURPOSE AND DISCLAIMER

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance cannot be relied upon and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes, common law and administrative rules to the relevant facts.

This file is an electronic version of a chapter of the Waterway and Wetland Handbook. This document was scanned from the master handbook chapter kept at the Bureau of Fisheries and Habitat Protection central office in Madison. All effort was made to ensure this scanned electronic copy is an actual copy of the hardcopy document. Due to the electronic scanning process, there may be rare instances of typographical errors, omissions or improperly formatted pages. Please refer to the master handbook if accurate transcription is required.

PURPOSE

Water level and flow regulation may be required in the interest of safety, to protect life, health and property, or to preserve public rights in navigable waters.

MECHANISM

Department decisions relating to the levels or flow of navigable waters are issued in the form of an order pursuant to ss. 31.02, 31.13, 31.19 and 31.34, Wis. Stats.

HISTORY

Most of the basic language of 31.02(1), (2), (3), and (4) was first adopted by the legislature as Chapter 652, Laws of 1911, the first of the Water Power Laws. The intent of the Water Power Law (in part) was to establish procedures for authorizing the construction, operation, and maintenance of dams, and to delegate authority to carry out those procedures to the Railroad Commission.

Development of the Water Power Law was an iterative procedure. Various dam owners challenged the new law and the Supreme Court ruled it unconstitutional in 1912 (Water Power Cases, 148 Wis. 124). Since the 1911 law was determined to be unconstitutional, it was repealed and a modified version, Chapter 755, Laws of 1913, was adopted. It was this law which required the Railroad Commission to establish gauging stations and maintain flow records. The 1913 law was also considered unconstitutional and it was repealed and replaced by Chapter 380, Laws of 1915. It wasn't until 1917 that the Supreme Court actually declared the 1913 Water Power Law unconstitutional in State Ex Rel. Owen, Attorney General, vs. Wisconsin-Minnesota Light and Power Company.
The 1915 law was determined to be constitutional. Chapter 474, Laws of 1917 amended and renumbered Chapter 69 (Water Power) and Chapter 146 (Mill Dams of the Statutes) to form Chapter 31 of the statutes. Many of the provisions and most of the language of that law remain essentially unchanged today. Chapter 125, Laws of 1949 added the following language to s. 31.02: "and may by order fix a level for any body of navigable water below which the same shall not be lowered except as provided in this chapter."

Prior to enactment of the water power laws, there were no specific water level and flow statutes other than a small provision in the Mill Dam Acts which provided that "The height to which water may be raised . . . shall be liable to be restricted and regulated by the verdict of a jury . . ." Other than that, the legislature sometimes established a maximum height to which dams could hold water.

As a result of the 1913 law, the Railroad Commission entered into an agreement with the United States Geological Survey in November, 1913, whereby the collection of stream flow data should be carried on as a cooperative measure. Under that agreement, the U.S.G.S. had direct charge of the work and the R.R. Commission paid a portion of the annual program cost as well as participating in flow measurements. Basically, the same cooperative agreement exists today; the DNR pays for part of the annual costs, but no longer participates in flow measurements.

Section 31.34, Wis. Stats., was adopted by Chapter 151, Laws of 1933. The primary purpose given was to protect the rights of lower riparian owners to a reasonably adequate natural flow of the stream.

**STANDARDS**

**Statutory Standards**

Under s. 31.02(1), Wis. Stats., the department may regulate and control the level and flow of water in all navigable waters. Specifically, the department may erect benchmarks or require the owner of a dam to erect benchmarks in relation to which the impoundment water levels can be determined. The department can establish the maximum level of water to be impounded and the minimum level of water to be maintained by the dam. Finally, the department is specifically authorized to establish a minimum level for any navigable waterway which includes natural lakes and streams. The standards for action under this statute are:

"The department, in the interest of public rights in navigable waters . . . may regulate and control the level and flow of water in all navigable waters. . .".

The department is responsible for preserving and protecting public rights in navigable waters. Generally, it is in the interest of public rights to:

a. Maintain natural scenic beauty.

b. Protect natural resources such as fish and game habitat.

c. Preserve acceptable conditions for navigation and its incidents.

d. Allow controlled fluctuations in level for resource management.

e. Insure that stream flow is relatively undiminished in quantity or quality.

f. Maintain water quality standards by ordering flow release amounts or scheduling flow releases from dams. Minimum flows (elevations) may also be established on flowing streams to preserve water quality.
"The Department, . . . to promote safety and protect life, health and property may regulate and control the level and flow of water in all navigable waters . . ."

Under this standard, the Department may regulate and control water level and flow to:

a. Minimize damage to property resulting from flowing, erosion or ice action;
b. Prevent failure of a structurally inadequate dam;
c. Assure effective operation of on-site sewage disposal system;
d. Prevent pollution sources from contaminating a lake or impoundment;
e. Assure that a stream has sufficient flow to assimilate waste and maintain water quality standards;
f. Minimize economic losses resulting from too much or too little water;
g. Allow dam maintenance or inspection;
h. Minimize the possibility of exposing potentially contaminated or unsightly bottom materials or creating stagnant water areas or undesirable odors associated with decaying bottom material;
i. Insure that stream flow is relatively undiminished in quantity or quality.

Note that the elements for consideration mentioned above may have application for lakes, impoundments, or streams.

Under s. 31.19, Wis. Stats., the department may order either a partial or total drawdown of an impoundment when it determines that it is necessary to prevent impending danger to persons or property.

Section 31.34, Wis. Stats., requires dam owners to pass at least 25% of the natural low flow of the stream on which the dam is being maintained. For administrative purposes, the seven day ten year low flow, Q_{7-10}^*, has been determined to be equivalent to 25% of the natural low flow. Dam owners who discharge water directly into a lake or reservoir are exempt from this requirement. This requirement may be waived if the department determines that a minimum discharge is not necessary for the protection of fish life.

**Administrative Code Standards**

Section NR 1.95 establishes the policy that wetlands shall be preserved, protected, and managed to maintain, enhance, and restore their values in the human environment, and that it is in the public interest that Department decisions which lead to alteration of or adverse effects on wetlands are based on this policy. NR 1.95 requires the Department to review proposals with the presumption that wetlands are not to be adversely affected. However, if it is not reasonable to deny a proposal and reasonable alternatives would also adversely impact on wetlands, the Department will require an alternative which has the least adverse wetland impact and the least overall adverse environmental impact to be used in lieu of the original proposal.

NR 102 established water quality standards which are normally considered in evaluation of permit or approval applications. However, s. 144.27, Wis. Stats., exempts Chapter 31 of the statutes from the provisions of subchapter II of Chapter 144 upon which the water quality administrative rules are based. While violation of the
water quality rules can not be used as a basis for permit denial, they can be used to help establish if a proposal meets statutory standards, i.e., in the interest of public rights or to protect life, health and property.

NR 116 establishes administrative standards which must be followed by local units of government. These standards should be reflected as conditions in permits or orders issued under sections 31.02, 31.06, and 31.13, Stats., to require applicants to conform with standards established in NR 116.

Administrative Interpretations

Authority over the levels of Federal Energy Regulatory Commission (FERC) licensed Projects - Bureau of Legal Services Opinion (7-5-78). The FERC has superior jurisdiction over the levels of flowages on federally licensed projects. The Department's role is largely advisory although FERC considers our opinion a major determinant in the establishment of levels for flowages.

PROCESS

Application

Any person may petition or request the Department to investigate and establish water level or flow requirements. Often these requests are in the form of a complaint. There are no application forms so this is generally accomplished by letter. The request should include specifically what is desired in the way of level or flow to enable that the Department to properly evaluate the request.

The Department may, on its own motion, initiate action to regulate levels or flow. Such action might be undertaken, for example, when necessary to protect a landlocked lake from otherwise legal diversion or to protect life, health and property from an unsafe dam. After investigation, the recommendation regarding levels or flow are incorporated into an order by the Department.

Notice Requirements

A public notice for proceedings to establish levels or flow is not required. If the Department wishes to solicit input from the public, it may issue a notice and hold an informational (legislative) as opposed to a contested case hearing. The Division of Natural Resource Public Hearings will not hold a hearing on the establishment of levels or flow requirements since it not a contested case action. A news release should be required so that interested parties will at least be informed of decisions.

Field Investigations

A comprehensive field investigation is crucial to establish acceptable minimum flows or minimum and maximum elevations. Due to the highly variable topography surrounding most lakes, streams and within proposed impoundments, we strongly recommend that surveying instruments be used to pinpoint critical elevations for consideration.

In many cases, insufficient records exist to accurately estimate a lake or stream's normal range of water elevations. In these instances, questioning the long term riparian landowners may provide valuable information regarding historical water levels.

1. To protect public rights, evaluations should consider:
   a. Navigation and its incidents;
b. Scenic beauty;
c. Fish spawning grounds and wildlife habitat; and
d. Wetland areas.

2. To protect life, health and property, evaluations should consider:

   a. Existing sewage systems;
   b. Pollution sources;
   c. Ice and water erosion potential;
   d. Flooding potential and easement requirements;
   e. Flow requirements to maintain water quality;
   f. Off-shore slopes;
   g. Dam structural and hydraulic adequacy if levels are raised; and
   h. Agricultural or irrigation diversions and other downstream beneficial users of water.

For temporary or seasonal drawdowns many of the same kind of considerations apply but the scope or magnitude of the concerns is usually much less.

**Criteria for Establishing Level or Flow Requirements**

Establishing level or flow requirements involves a variety of situations. In order to identify appropriate considerations, the various situations are discussed separately.

For gaining consistency and uniformity in discussing water levels, the following definitions are provided:

1. Historic maximum means the highest recorded water level.
2. Historic minimum means the lowest recorded water level.
3. Normal level means the level ordinarily (commonly) held by a dam.
4. Ordered maximum means the highest water level established by department order to be achieved by reasonable operation of a dam.
5. Ordered minimum means the lowest water level or levels established by department order to be achieved by reasonable operation of a dam.
6. The normal operating range means the water level elevations bounded by the ordered maximum and ordered minimum or where levels have not been established it means the typical range of fluctuation.

**A. Natural Lakes With No Outlet**

A landlocked lake's level depends upon inflow (precipitation, surface runoff, groundwater inflow) and outflow, or water losses, resulting from evaporation, groundwater recharge or physical removal by ditching, irrigating, hauling water for construction, etc. To protect public and riparian rights, it may be necessary to establish a minimum level for the lake below which no water may be removed. However, establishing a minimum level does not guarantee that a lower water level will not occur naturally, but the minimum level will establish an elevation below which the water cannot be lowered artificially.

We must consider several factors to establish an acceptable minimum level including:
1. The Elevation of the Ordinary High Water Mark (OHWM).

Since upland adjoining a lake is privately owned, we should generally set the minimum level at or below the OHWM.

2. The Minimum Level to Protect Public Rights

The chosen elevation should protect recreational opportunities and the values associated with fish and game habitat, aquatic and terrestrial vegetation.

3. The Minimum Level to Protect Riparian Rights

Generally, the level chosen to protect public rights is sufficient to protect riparian rights unless the lake has limited fish, game, vegetative, and recreational values. In such instances, the Department has a duty to establish an elevation that will protect riparian rights; i.e., right of access to the water, right to have water against their land, right to use water for domestic purposes, etc.

4. The Minimum Level to Protect Life, Health and Property (see Discussion under Statutory Standards)

B. Natural Lakes With Outlet Streams

In addition to the inflow and outflow (or losses) described for landlocked lakes, the range of elevations of a lake having an outlet depends largely upon the outlet stream's discharge capacity (a ditch or channel may also allow outflow).

Generally, the Department is requested to establish minimum and maximum elevations in conjunction with an application to construct an outlet control structure (dam, ditch or channel). A person may make the request in an attempt to restore a higher elevation, maintain a given low elevation, prevent a lake from reaching high elevations or establish a new range of elevations. In some instances, control structures have been constructed in the past without any maximum or minimum elevations being established. For such situations, the Department may (1) on its own motion, (2) upon complaint, or (3) upon petition take action under s. 31.02, Stats., to establish elevations for such control structures to maintain.

Whenever possible, water levels must be maintained within the established range. You should recognize that it may not be possible to maintain the minimum level during a low precipitation period or the maximum level during a high precipitation and flooding period.

We should consider the following factors in order to establish acceptable minimum and maximum elevations:

1. The Normal Operating Range of Water Levels

We should determine the normal operating range of water levels and possible causes for the fluctuation. A lake subject to great fluctuations may be difficult to control without extensively modifying the outlet. Historical information may prove invaluable for hydrological and hydraulic evaluation of a proposal. The Water Regulation Section has some water level information not found in the district or area offices.

For physical operation, elevations established within the normal operating range may be best. Affected riparians may more readily accept levels established within the normal range. The elevation difference between the established minimum and maximum varies from lake to lake, but proper outlet control design should control the range between the maximum and minimum to allow less fluctuation.
2. The Range of Elevations Necessary to Protect Public Rights (see discussion under statutory standards)

3. The Range of Elevations Necessary to Protect Life, Health and Property (see discussion under statutory standards)
   a. Upstream from control structure
   b. Downstream from control structure

4. The Ordinary High Water Mark (OHWM)

   The OHWM is particularly significant to establish a lake's maximum and minimum elevations since it is the elevation that separates privately owned uplands from state owned lakebeds. The OHWM elevation generally is not the best choice for establishing the maximum level because a natural lake regularly exceeds the OHWM elevation. Since this occurs naturally, there is no liability for any damages to private property. Establishing the maximum elevation above the OHWM constitutes a "taking" of private property. All affected riparians must agree to this "taking" by signing an easement to the dam owner, or the dam owner must purchase the property potentially flooded. To establish levels within a "normal" range, the maximum elevation should probably be slightly below the OHWM.

5. The Outflow Capacity of the Outlet and Control Structure

   As previously mentioned, the rise in water surface elevation which a lake will experience during heavy precipitation depends primarily upon the outlet's outflow capacity. Through hydraulic and hydrological design a dam, ditch or channel can usually achieve a specific lake elevation for any given flood frequency. In the case of a dam, the outlet stream's outflow capacity must be evaluated to help prevent the installation of a dam that is too large or too small. If the objective of dam construction is to increase outflow capacity, the owner may also have to improve the outflow streams capacity by removing heavy vegetation or modifying the channel according to regulatory authority contained in Chapter 30, Wis. Stats.

C. New Dams on Navigable or Nonnavigable Streams

   When considering new dams on streams, essentially the same criteria mentioned above applies to determine maximum and minimum levels except that no OHWM or normal range of levels will exist at the water level proposed to be maintained by the dam. The standards contained in Sections 31.05 and 31.06, Wis. Stats., should be applied since they are far more specific than the standards set forth in Section 31.02, Stats.

D. Raising or Enlarging Existing Dams

   Aside from questions of structural and hydraulic adequacy of the dam to maintain a higher water level in the impoundment, the assurance that the applicant has acquired 100% of the flowage easements to the new regional flood elevation required by the higher water level is most important. Though section 31.13, Stats., does not require that flowage easements be obtained as a prerequisite to permit issuance, the strong language requiring that we protect property rights has led to that administrative requirement for any applicant not having the power of eminent domain.

   This section of the statutes has been used often in the past when the dam owner simply wants to change the established operating levels. This procedure should be considered when increased levels may adversely impact on riparian owners since this section affords them greater protection.
E. Minimum Flow Requirements

In order to meet statutory and/or administrative code standards, we may have to establish minimum flow requirements. The same criteria apply to determine the minimum flow for a dam or to maintain minimum flows in an unaltered stream segment. The minimum flow required should: (1) protect public rights, (2) protect life, health and property, or (3) meet the minimum requirements in Section 31.34, Wis. Stats.

Section 31.34 states that a dam must pass at least 25% of the stream's natural low flow except as otherwise provided by law (Section 31.02), or where the Department determines that no minimum flow is necessary to protect fish. The term "pass" has been interpreted to mean only the flow through the control sections of the dam (gates, spillways, etc.) and not any uncontrolled flow through the dam (leakage, seepage, etc.). If the dam owner wishes us to consider the uncontrolled flow, he should have the burden of proof that the combined controlled and uncontrolled flow meets the required minimum flow. The present staff recommendation is that $Q_{7.10}$ be used as the value for 25% of the natural low flow.

We have established minimum flows (or elevations) in every district resulting from the intensified irrigation program. Therefore, most of our field staff have gained experience in evaluating stream flow requirements. See Chapter 90 of the handbook for additional discussion.

F. Hydrologic and Hydraulic Considerations

Although a separate section of the handbook deals with dams and dam design criteria the following factors relate to establishing and maximum or minimum elevations and/or minimum flows:

1. Design flood frequency and magnitude;
2. Regional flood magnitude;
3. Any additional flood magnitude required for evaluation;
4. Inflow-stage-discharge relationship for flood magnitude of concern without a water level control structure;
5. Inflow-stage-discharge relationships for flood magnitudes of concern with proposed water level control structure; and
6. Minimum flow required to meet statutory or administrative code standards.

G. Temporary Drawdowns Where There Is An Ordered Minimum

Dam owners may occasionally wish to draw the level of their flowage below its ordered minimum elevation. At times, a drawdown may be of an emergency nature such as a potential dam failure. In such instances, a dam owner is required by law (s. 31.18(1), Wis. Stats.) to take action to protect life, health and property. If he lowers the level of his flowage, he is simply meeting his statutory obligations and no drawdown order is required. Before allowing the dam owner to raise the water level to its normal operating range, a repair order may be necessary or maintenance work may have to be performed to correct deficiencies. The dam owner may also desire nonemergency drawdowns for dam inspection purposes or to make dam repairs. In such instances, he should request authority from the Department. Concerns of other riparians should be considered in evaluating the request.

Temporary drawdowns may be desired by property owners for specific reasons such as for dredging projects or to reduce shoreline erosion due to unusual circumstances. Concurrence of the dam owner with the temporary drawdown plan may be required before the Department can issue the drawdown order. If the dam is used for hydro-power and the dam owner is dependent on the power for his livelihood, it may not be appropriate for the Department to issue a drawdown order if he objects.
H. Seasonal Drawdowns

Seasonal drawdowns may be desirable for a variety of reasons, such as to minimize shore damage potential or for fish or game management practices. Again, the dam owner should agree to the seasonal drawdown plan, particularly if the dam is used for hydro power.

I. Drawdowns Where There is NO Ordered Minimum Level

Where there is no ordered minimum level, a dam owner is within his rights to lower the flowage below its normal level, particularly when such drawdowns constitute usual or normal operation.

If complaints and/or a request is made to establish a minimum level, the Department must investigate the situation. A balancing of the dam owner's needs and property owner's concerns is needed to make a determination.

Final Disposition

All Department decisions on levels or flow are issued in the form of an order. In the future, new levels or flow orders pertaining to authorized dams should be issued in the form of an amendment to the initial permit and order authorizing the dam or as an amendment of previously levels orders. By following this procedure, all permanent orders will be located in one file and the problem of having several separate files for the same dam will be eliminated.

Since temporary drawdown orders are one time shots, they may be issued separately. For informational purposes, it is suggested that they be issued under the authorizing docket number, perhaps using a subscript such as "A".

In the case of ordering minimum flows for streams or minimum elevations for natural lakes, the question has been asked, "who do we issue the order to?" These orders are generally issued because someone is conducting an activity which adversely affects the waterway. Although the activity may not be illegal, issuing minimum level or flow orders will serve to control the activity. The order can simply be issued, it is not necessary to issue it to anyone in particular. Copies of the order should be distributed to interested parties and it should be pointed out that causing the orders to be violated is a punishable offense.

Monitoring

Depending upon the scope of Department orders, performance monitoring will provide valuable information regarding the:

a. Sufficiency of minimum flow requirements;
b. Adequacy of control structure design;
c. Effectiveness of Department evaluation;
d. Adequacy of established levels; and
e. Need to issue order modification.

Emergency Procedures
Occasionally problems will develop that may threaten the immediate safety of the structure. In such cases, the downstream area should be assessed to determine probable dangers resulting from the anticipated failure. If human life is threatened, we should take emergency action to draw down the impoundment and begin evacuating the downstream area. In most cases, the sheriff's office is an appropriate contact to aid in an evacuation attempt.

If any emergency threatens the dam, we should order draw down of the impoundment. If the dam's spillway is impaired so that a drawdown cannot be facilitated, the structure should be breached. The owner may make alterations to the structure if an emergency exists without obtaining approval (an order) from the Department.

**Education**

Educational materials include:

Brochure - "What you need to know about owning a dam."

Handout - "State Dam Regulation Questionnaire."

**Enforcement**

Section 31.34, Wis. Stats., provides that violation of the section is subject to fines of not less than $50 nor more than $1000. Enforcement pursuant to this section requires local court action.

Sections 31.02, 31.13 and 31.19, Wis. Stats., do not include any enforcement provisions. However, those sections as well as s. 31.34, Wis. Stats., may be enforced through either s. 31.23(2) or s. 31.25, Wis. Stats.
Date: July 1, 1986   RESENT 9/25/89 File Ref: 3500

To: District Water Management Coordinators
    Water Management Specialists
    Program Staff

PUT IN: Chapter 130, Water Regulation Guidebook

From: Scott Hausmann - WZ/6

Subject: Clarification of M.C. 3539.1

Manual Code 3539.1 was revised on December 23, 1985, which omitted language that stated department approval was not required to drawdown dams and impoundments for which no minimum levels have been established. Removal of this language from the Manual Code appeared to imply that department approval is required for all drawdowns regardless if minimum levels are or are not established.

Prior to the December 23, 1985, Manual Code revision, the Manual Code implied explicitly that we did not have regulatory authority over drawdowns if no minimum water levels were established. Because that strict interpretation was not correct, it was deleted during the revision.

The department does have authority, pursuant to sections 31.02 and 31.18, Statutes, to regulate drawdowns, even if no minimum level is established, in the interests of public rights in navigable waters or to promote safety and protect life, health and property...

If no minimum levels are established and there would be no detriment to the public interest, life, health and property, then there should be no reason for requiring department authorization for a drawdown.

SH:DS:el

cc: Robert Roden – WZ
Date: November 18, 1988  File Ref: 3500

To: District Directors

Insert: Chapter 130 Water Regulation Handbook

Distribution: Program Staff

From: Scott Hausmann  WZ/6

Subject: Levels and Flows of F.E.R.C. Relicensing Projects

One of the items of concern discussed at the recent FERC relicensing meeting of October 13, 1988 in Stevens Point was the need for obtaining and/or maintaining adequate stream flow records for projects coming up for FERC relicensing. To adequately and consistently address this issue Department comments during the stage one consultation should include the following suggested language:

"In order to protect the public rights in navigable waters and to verify that the hydropower plant is operated in accordance with the operating requirements of the license your draft application should include sufficient information to enable us to determine that adequate measures will be installed and/or maintained to collect data concerning impoundment levels and downstream flow releases. Such measures may include, but are not limited to, installation of staff gauges upstream of the dam to monitor levels, automatic level recorders, continuous or hourly flow releases based on gaging station readings, gate opening readings or downstream staff gauges with an associated stage/discharge curve calibrated at least twice a year. Such levels and flow data shall be provided to the Department annually or at such other intervals as deemed appropriate.

In cases where adherence to license level and flow requirements is highly controversial, may significantly impact the resource, or the past performance of the licensee in complying with the license conditions has been less than acceptable, more specific comments or measures may be more appropriate than the above suggested language.

Requested by: Ken Johnson

Drafted by: John Coke

Reviewed by: Ken Johnson

cc: Bill Clark - NWD
    Tom Lovejoy - WD
    Bob Martini - NCD
    DuWayne Gebken – EA
DATE: April 15, 1991

TO: District Directors

PMMS Response: Insert Chapter 130, Water Regulation Handbook

FROM: Robert Roden - WZ/6

Distribution: WRZ Program Staff

SUBJECT: Minimum Flow Requirements of s. 31.34

We have been asked for an interpretation of the requirement of dam owners to pass "25% of the natural low flow" found in Section 31.34. This response will be limited to just a referral to the administrative interpretation contained on page 6 of Chapter 130 of the Water Regulation Handbook which states that the $Q_{7,10}$ is equivalent to 25% of the natural low flow. This interpretation has been in effect since December 7, 1982 when Chapter 130 of the Handbook was distributed.

This issue was further expanded upon by the previous PMMS Response of December 15, 1983 which is being redistributed as an attachment to this response.

Drafted By: John Coke - WZ

Requested By: John Gozdzialski - NWD

Reviewed By: Scott Hausmann
Larry Larson
DATE: December 15, 1983    FILE REF: 3550 (WMC)

PMMS RESPONSE: Put in: Chapter 130 of Water Regulation Handbook

TO: District Directors

FROM: Scott Hausmann

Distribution: All Program Staff

SUBJECT: Minimum Flow for Dams (Sec. 31.34, Stats.)

We have been asked "Can we require a dam owner to pass a minimum flow when the dam discharges directly into a lake, millpond, storage pond or cranberry marsh since those situations are exempt from section 31.34? Can we require a dam owner to pass greater than the Q7.10 flow?"

Although dams that discharge directly into a lake, millpond, storage pond or the cranberry marsh are excluded from the minimum flow requirements of section 31.34, they are subject to our authority under section 31.02. Section 31.02 is a statute which confers broader powers to the department to regulate the flow of water in all navigable waters "in the interest of public rights."

Section 31.02 can be used to require any reasonable minimum flow where it can be shown such a flow is necessary to protect public rights in a waterway (see handbook guidance) regardless of the minimum requirement or exclusions of section 31.34. Section 31.33 also makes section 31.02 applicable to nonnavigable streams.

Reviewed by: Scott Hausmann
Bob Sonntag
Mike Cain

SH:cb
4449K
DATE: October 11, 2001

TO: Regional Directors  
Statewide FERC Committee

FROM: Susan Sylvester – AD/5


Under Section 31.02, Wis. Stats., the Department may regulate and control the level and flow of water for dams on navigable waters. Pursuant to Section 401 of the Clean Water Act and under Wis. Admin. Code NR 299, Water Quality Certification (WQC) authority the Department may also regulate flows and water levels on FERC licensed hydroelectric dams. Recent court decisions indicate state WQC conditions must be incorporated by FERC as conditions in their (re)licenses.

Unless site-specific analysis shows that an alternate operating regime would not have serious adverse environmental impacts, run-of-river operating mode should be ordered so that dam operations are least disruptive to the normal river flow. The enclosed guidance is provided to assist Department staff, when a decision has been made to require a run-of-river operating mode at a dam, in defining run-of-river performance, compliance standards and monitoring needs.

cc: Al Shea – WT/2  
Mike Staggs – FH/3  
Mary Ellen Vollbrecht – FH/3  
Joanne Juhnke – FH/3

Enclosure: WDNR Run-of-River Guidance (October 11, 2001)
WDNR Run-of-River Guidance
October 11, 2001

Purpose

When Department staff have determined that a run-of-river operating mode should be required at a dam, it is important that all parties clearly understand what is expected. This guidance is provided to help define a performance standard and monitoring needs by which to determine compliance.

Application

The Department has found, in most cases, the public interest is best served when state or FERC licensed dams operate so as not to disrupt the normal river flow. This type of operation, commonly referred to as run-of-river or ROR, assures tailwater reaches below dams are not subjected to unnatural flow variations caused by dam store and release operations (also called pulsing, cycling or peaking). These variations may reflect efforts to meet peak demand for electricity, be a function of equipment with limited flexibility or be the result of an inadequate level of attention given to operation. It has been extensively documented in the scientific literature that run-of-river operations best protect water quality, fish and wildlife habitat, recreation, navigation, aesthetics and control erosion in dam tailwaters.

When recommending ROR operations, it is important to clearly define a compliance standard and specify a monitoring protocol(s) to measure data capable of being used to determine if the performance standard is being met. Failure to have both components in place can lead to disagreements between dam operators, FERC, and the Department, sometimes leading to costly enforcement or legal action. Also, dam operators may acquire and install equipment which may not be capable of operating within or monitoring compliance with ROR requirements.

The ROR definition which follows has been developed by the Department, based on the above factors, in attempt to assure that dam operations best protect public interest values.

ROR Definition

At all times dam owner/licensee shall maintain a discharge from the dam (includes powerhouse, spillway or diversion channel) so that, at any concurrent point in time, flows, as measured downstream, approximate the sum of inflows (main channel and tributaries) to the reservoir. Following this type of operation should also result in minimal fluctuation of the project reservoir.

*Legal Notice: This document is intended solely as guidance and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. This guidance does not establish or affect legal rights or obligations and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and the administrative rules to the relevant facts
The Department is aware of alternate definitions of ROR that have historically been used but resulted in problems. One common example is a simple “outflow equals inflow”, with no correlation to any measured flow data. In 1995 a FERC hearing examiner found in an enforcement case that such a definition provided insufficient guidance in that it failed to apprise dam operators of what quantity of flow fluctuations would be permissible. A second common example of a problem ROR definition is “reservoir water level fluctuations are limited”. This definition attempts to prevent the dam operator from substantially storing within and subsequently releasing water from the reservoir, thus avoiding substantial flow fluctuations in tailwater areas below the dam. Even a few inches of reservoir water level operating range, especially in a large reservoir, can result in significant flow fluctuations in the tailwater. For example, opening a dam gate for a short period may cause only a small change in reservoir level, but can greatly change downstream discharge. Such operations can result in significant adverse environmental and recreational impacts.

**ROR Compliance Performance Standard**

Run-of-river compliance is determined by comparing inflow with outflow. “Approximate” is used in the above definition to recognize several operational and natural conditions which make it difficult or impossible for inflow upstream to exactly equal outflow downstream of a dam despite an operator’s best efforts and installation/use of the most sophisticated equipment. Such constraints can include:

- travel time for flow from when it enters the reservoir to a point in the tailwater.
- unmeasurable inflows to reservoir or tailwater (small tributaries, groundwater discharge, etc.)
- unmeasurable project outflows (evaporation, freezing, groundwater recharge, leakage, etc.)
- basin runoff characteristics (flashiness)
- reservoir or river channel configuration or other site-specific physical features.

Ideally, it would be best to attempt to quantify and factor in these conditions when comparing inflow vs. outflow. Unfortunately, this will not always be possible.

The Department should normally seek, and clearly describe as a permit/FERC license WQC condition, a run-of-river compliance standard where measured outflow from a dam is within ± 10% of measured inflow. This range should assure that outflow reasonably matches inflow, such as would reflect a natural hydrograph, and for which public interest values would be protected as compared to greater, unnatural flow fluctuations. If no significant adverse effects are expected and/or operational limitations warrant, a higher percentage can be negotiated on a site specific basis. For a new dam or when a dam is changing operations to run-of-river, it may be acceptable and appropriate to establish a target compliance standard and monitor performance for an agreed-to and predetermined length of time to determine if the target compliance standard is reasonably achievable or should be changed.

To demonstrate and compare the difference, Appendix 1 contains hydrographs showing dams where run-of-river compliance is and is not being met.

It is important when a new project or change to ROR operation is being proposed or negotiated, that early discussions takes place with potential applicants, FERC licensees’ and other parties so there is clarification as to the meaning, compliance and monitoring expectations of run-of-river operations. During early consultation for FERC license applications, the Department should identify the need for run-of-river compliance standard(s) in commenting on applicant’s Initial Consultation Package. The test period should be conducted as part of pre-application studies. This will help avoid problems, including possible enforcement or legal battles, after start-up. Experience shows these problems are very difficult, contentious and often expensive (i.e., capital investment, staff time, legal costs, etc.) if not resolved prior to construction and/or start-up. If agreement cannot be reached, the Department should still pursue operating conditions, including run-of-river standards, if necessary to protect the public interest. Such conditions can be incorporated and thoroughly described in Chapter 31.
permits/approval or WQC for FERC regulated dams. If the dam operator chooses, they can elect not to construct, or cease to operate the project or seek judicial review of stipulated conditions.

Exceptions

There may be times, such as during drought conditions, when aquatic resources in project tailwaters can best be protected by modifying run-of-river operations. For instance, let’s say a sensitive fish spawning area or mussel bed exists below a dam. If project inflows are so low that passing just inflows would not keep these areas inundated, it may be appropriate to augment downstream flow using storage water in the reservoir. To cover such occurrences, it may be appropriate to add a permit/WQC condition that allows temporary exception to run-of-river compliance for fish and wildlife protection or enhancement or to protect public health and safety, but only with concurrence from the Department. It may also be appropriate to consult with other interested parties when considering temporary modifications to run-of-river compliance. For instance, if such modifications may potentially impact federally listed endangered or threatened resources, advance consultation with USFWS should occur.

Monitoring

The compliance standard would be unenforceable if there was not an adequate means of measuring inflow and outflow. Without sound monitoring data, means to identify or quantify if a run-of-river violation is occurring can become contentious, with possible serious impacts to public interest values. If violations occur, are they an isolated incident possibly due to natural causes? Or are they repetitive, intentional or not, and due to dam operator economic or other motives? Monitoring can help identify the cause of problems, and greatly simplify identification of remediation measures needed. Or, if needed, it can provide factual data to use as evidence in enforcement proceedings.

Stream flow (not just water level) should be gauged at all projects where the Department determines the need to protect the downstream reach from artificial flow fluctuations. Gauges should be located, installed, calibrated and operated in accordance with USGS Water Supply Paper 2175, “Measurement and Computation of Streamflow (volumes one and two).” Gauges capable of being called up on the Internet should be considered if access to near real-time data by a variety of parties is important. Other techniques are available for immediate access to real-time data and should be considered on a case-by-case basis (e.g., automated phone number which provides instantaneous flow). The Department can accept an alternative monitoring plan (i.e., measured or calculated discharges from turbines, spillways, water level gauges, etc.) if the dam operator can demonstrate it will provide data equal to USGS standards and in a format and frequency which will enable the Department to determine run-of-river compliance.

The extent that dam design and operations can cause flow fluctuations should be considered in determining appropriate monitoring requirements:

FERC Dams

Optimally, the Department prefers automated, instantaneous inflow and outflow flow gauges at FERC regulated dams. Hydro dams have controllable gates which can be operated to vary the passage of stream flow and, therefore, disrupt natural flow patterns. With such gauges it will be simple to compare inflow and outflow and see if the compliance standard is being met. Hydro projects should also have staff gauges installed in reservoirs and tailwaters which are clearly marked showing required operating ranges.
**State Regulated Dams**

State regulated dams should be considered in three categories when determining ROR requirements and monitoring:

A. Dams with automated or manual gates where frequent (daily) flow control adjustments are expected.
B. Dams with manual gates that are utilized infrequently.
C. Dams with only a fixed crest spillway – no flow adjustments possible.

Category C dams need not have an operation plan or monitoring plan. Category A and B dams may need to have an operation plan and monitoring required depending on: 1. Sensitivity of the stream below the dam to impacts from flow fluctuation (length of tailwater affected, species expected, etc.); 2. Downstream water needs (waste assimilation, irrigation, other dams, etc.); or 3. Risk that dam operations will cause flow fluctuations if a plan and monitoring is not required.

When Category A & B dam operations can have serious impacts on environmental, recreational and other public interest values, a detailed run-of-river compliance standard should be established. Where a ROR requirement is specified, Category A dams should be equipped with automated, instantaneous flow monitoring equipment and a flowage staff gauge clearly marked (ie notched) indicating the required operating range(s). Category B dams should include: 1. A log of all operational adjustments; 2. A specific plan for gate operation which deals with issues of frequency, rate, and extent of allowable gate changes; 3. A flowage staff gauge; and 4. A means for the operator to convert flowage stage and gate settings to total stream flow.

For clarity, the table below is provided as a summary of the above two paragraphs for state regulated dams:

<table>
<thead>
<tr>
<th></th>
<th>‘A’ dams</th>
<th>‘B’ dams</th>
<th>‘C’ dams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations plan needed</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Need ROR compliance standard</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Automated, instantaneous flow gauging</td>
<td>Yes</td>
<td>Yes, if high public interest values are at risk</td>
<td>No</td>
</tr>
<tr>
<td>Logs/data which can be used to calculate instantaneous flow</td>
<td>No</td>
<td>Yes, if automated flow gauges not available</td>
<td>No</td>
</tr>
<tr>
<td>Staff gauge</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
Gauging a stream to determine if a stable flow is being delivered by a dam is considered the responsibility of the party(ies) operating the dam. Cost sharing for stream gauges may be available to units of government from USGS. In some cases, private parties operating a dam have gifted money to DNR, which is then cost shared with USGS to finance a flow gauge. The availability of USGS funds can depend on the need for additional flow gauging in the region beyond the need to document dam operations.

Wherever possible, the compliance monitoring system should be installed and operational one year prior to any significant change in operation. This is especially important for new projects with a single monitoring point (i.e., absent inflow and outflow gauges). Sometimes a trial period is deemed necessary before a final operational definition and compliance monitoring plan can be developed. On FERC licensed dams, this is often used as justification for postponing all progress on these issues until post-licensing. The definition of "run of river" and the associated monitoring plan should not be entirely deferred to after FERC licensing or after Chapter 31 permit issuance for state regulated dams. During stage 2 of hydro (re)licensing consultation or in Chapter 31 permit language it should be clearly understood by all parties, such as in a draft plan/agreement or other written form, which provisions are subject to change during a post-license trial period and which are not. For example, numeric values may be considered negotiable (i.e., +/- XX%) while the underlying concept is not (i.e., limit based on a fraction of the daily average flow). It may take several years to work out the operational issues when a new project is (re)developed. Note that this allowance is primarily in recognition of difficulties in monitoring flow and is not an allowance for existing inadequate equipment or inattentive operation.

Every hydropower project should maintain an hourly log of project operations, which includes headwater elevation, unit generation through each turbine in cubic feet per second, any spillage and tailwater elevation. This data, along with accurate rating curves, would best describe what is happening at the project.

Determination of ROR compliance during winter at FERC or state regulated dams should recognize that some gauges are susceptible to ice effects and may produce inaccurate flow data. A routine recalibration schedule should be incorporated as a permit/license condition to assure monitoring data is accurate.

Appendix 2 provides examples of acceptable alternative monitoring scenarios with accompanying ROR compliance definitions.

**Use and Updating of Guidance**

Following the above-described guidelines should be helpful to assure consistent Department application and regulation of run-of-river operations at state regulated and FERC regulated dams. The guidelines could also be useful as a training tool for new staff. Also, this may be a useful document to clarify points of discussion or negotiations with dam operators, FERC staff or other interested parties.

It is intended that this guidance provide as much information to Department staff regarding run-of-river issues as possible. Appendix 3, a technical paper prepared by FERC staff in 1997, provides more background and perspective. Other appendices will be added on a continuing basis in an effort to keep this document updated.
Reviewed/approved by:

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Date

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Date

Susan Sylvester, Administrator
Division of Water

Date
Appendix 1

ACCEPTABLE VS. UNACCEPTABLE RUN-OF-RIVER HYDROGRAPHS

INFLOW

OUTFLOW

NOT run-of-river

Pulsing or Cycling, due to equipment limitations

No intentional peaking or pulsing on a set pattern, haphazard operation

Peaking, intentional store and release

Inflow (as above) stable, outflow with severe fluctuations

Run of River (inflow and outflow equal)
APPENDIX 2

RUN OF RIVER HYDROPOWER OPERATION USING TWO OR MORE FLOW GAUGES

In this scenario total project flow is gauged at or below the dam and inflow is gauged at one or more points entering the flowage. Requirements for this alternative include:

Upstream gauges must be capable of accounting for a specified percentage of inflow under base flow conditions. The adequacy of upstream gauging is a site-specific determination.

Outlet gauging must account for all water passed by the project. This may require multiple gauging points where bypass channels are present. Flow can be determined at a separate gauge (eg USGS style) or summed discharges from project turbines, spillways, gates, leaks etc. Values must be recorded at least once every 15-60 minutes at projects with automated operation. Manually operated projects can record data less frequently if it is demonstrated that all critical flow conditions will be measured. Data capture need not always be automated, but should generally be required at larger and more complicated projects.

Travel time adjustments must be applied during compliance determinations. This is usually a simple matter of graphically comparing the two data sets and applying the necessary time shifts.

Correction factors will probably be necessary to account for un-gauged water. The significance of these factors can be determined through a multi-year initial trial period. Alternatively, they can be estimated on a theoretical basis, such as:

A constant addition for groundwater inflow.

A % adjustment for un-gauged surface water inflow based on watershed area ratios.

A temperature/area weighted adjustment for evaporation losses.

A temperature/area weighted adjustment for losses during ice making.

Compliance definition:

The two flows, as determined above, should agree with each other within a specified percentage. The Department will normally accept +/- 10% as a flow range, but can negotiate a higher percentage range on a site-specific basis.

RUN OF RIVER HYDROPOWER OPERATION USING ONE TAILWATER FLOW GAUGE

There are some circumstances that do not allow for the use of gauges both above and below a project. These instances should be the exception rather than the rule. In this scenario, compliance is determined at or below the dam only. Upstream flow must be natural and not susceptible to influence of other dams. If upstream dams are expected to alter natural flow regimes to the point of complicating compliance determination, then paired gauges above and below the flowage are needed.

Outlet gauging must account for all water passed by the project. This may require multiple gauging points where bypass channels are present. Flow can be determined at a separate gauge (eg USGS style)

or summed discharges from project turbines, spillways, gates, leaks etc. Values must be recorded at least once every 15-60 minutes at projects with automated operation. Manually operated projects can record data less
frequently if it is demonstrated that all critical flow conditions will be measured. Data capture need not always be automated, but should generally be required at larger and more complicated projects.

**Compliance definition – Alternative 1**
The preferred compliance measure is defined as an acceptable range about the daily average flow expressed as percentage +/-. The Department will always normally +/- 10% range as an acceptable level of gauge performance, but can negotiate a higher percentage on a site-specific basis. This compliance standard is not applied under the following conditions:

- Rainfall events, as demonstrated by an event hydrograph or using records of rainfall in the watershed.
- Freeze/thaw cycles attributable to daily fluctuations in ambient temperature in the presence of snow cover.
- Ice making in the flowage attributable to an incident of very cold weather. (Example - making 1" of ice on a 1000 acre flowage on a cold night will cause 84 cfs of outflow to disappear for 12 hrs.)

All other operational requirements other than the +/-% value (eg. flowage water levels, ramping rates, gate sequencing etc.) would still apply under these circumstances.

**Compliance definition – Alternative 2**
(This compliance definition should not be used on projects with large reservoirs, where headwater elevation does not fluctuate significantly with changes in unit operation and/or downstream flows. Check should be made to see if unacceptably large downstream flow fluctuations during drought conditions will produce measurable changes in headwater elevation before using this compliance definition. If either of the above situations exists, alternative 1 above should be used).

If the flow in the river is within the hydraulic capacity of the project’s turbines and there is no spill, or only a minimum flow is occurring through the spillway, then the project would be deemed in run-of-river compliance when –

- Flows at the downstream gauge are increasing, project generation is increasing, and the headwater elevation is either increasing or constant, or
- Flows at the downstream gauge are decreasing, project generation is decreasing, and the headwater elevation is either decreasing or constant, or
- Flows at the downstream gauge are constant, project generation is constant, and the headwater elevation is constant.

If river flows are higher than the hydraulic capacity of the project’s turbines, and spill, above any licensed mandated minimum flows, is occurring, then the project would be deemed in run-of-river compliance when –

- Flows at the downstream gauge are increasing, project generation is constant, spill is increasing and the headwater elevation is either increasing or constant, or
- Flows at the downstream gauge are decreasing, project generation is constant, spill is decreasing and the headwater elevation is either decreasing or constant, or

An allowance for accuracy of monitoring equipment will be made. The Department will assume a 10% accuracy allowance unless a higher value justified on a site-specific basis.

An accuracy allowance for changes in reservoir water level will always be determined on a case-by-case basis.

**Compliance definition – alternative 3**
If, due to physical characteristics of the watershed, impoundment or basic dam configuration, acceptable flow regulation cannot be achieved through definition 1 or 2, the Department may choose to establish only a minimum
lower flow expressed as a percentage of the daily average flow under specific or all flow conditions. This has the advantage of providing a level of protection from project-induced fluctuation similar to that attained by specifying a flow range without having to make exceptions for runoff events. This alternative should be pursued only if those listed above don’t work out.
Run-of-River License Requirements, A Compliance Perspective

Timothy J. Welch and Thomas J. LoVullo

Abstract

Many licenses issued by the Federal Energy Regulatory Commission (FERC) include provisions requiring licensees to operate hydroelectric projects in a run-of-river mode. Since 1988, the Division of Licensing and Compliance has conducted numerous compliance investigations involving deviations from run-of-river requirements. In some instances, FERC imposed civil penalties for run-of-river violations.

Although functional definitions of "run-of-river" vary, many run-of-river license articles include language requiring licensees to operate projects such that: 1) outflow approximates inflow and; 2) reservoir water level fluctuations are minimized. Adherence to run-of-river requirements is expected, although we recognize that project operators often face certain constraints such as project structures, varying inflows, etc., when operating projects in a run-of-river mode. Because these constraints vary greatly from project to project, FERC staff considers run-of-river operations site specific.

We discuss the type of data FERC staff need to accurately monitor compliance with run-of-river requirements. We also discuss factors staff may consider when reviewing compliance with run-of-river requirements.

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The views expressed in this paper are those of the authors and do not necessarily reflect the views of the Office of Hydropower Licensing or the Federal Energy Regulatory Commission.
Finally, we encourage licensees to work with FERC staff and the resource agencies in determining a framework of operational constraints, given the limitations of the project, best suited for complying with run-of-river requirements.

Introduction

A survey of new hydroelectric licenses and rel licenses issued by the Federal Energy Regulatory Commission (FERC) indicates a majority include provisions requiring licensees to operate projects in a run-of-river (ROR) mode, such that project inflows approximate project outflows. In many instances, ROR requirements were recommended by FERC and natural resource agency staff because of the adverse, environmental impacts often associated with downstream water level fluctuations from store and release operations. These adverse environmental impacts may include fish strandings, elimination of algae and aquatic macrophytes due to periodic exposure of channel margins, delayed migration of anadromous fish, and dislodging of aquatic insects and fish eggs due to rapid changes in discharge (Rochester et al. 1984).

Hydroelectric projects operated in an ROR mode generally have less adverse environmental impacts on downstream aquatic resources because downstream flow fluctuations are minimized and may emulate the natural hydrograph of the river. In fact, newly imposed FERC ROR operational requirements on store and release facilities may lead to improved downstream environmental conditions. In a study of lake sturgeon, downstream of a recently licensed Michigan project, Auer (1996) found larger total numbers of lake sturgeon and larger spawning females two years after the project ceased store and release operations and began FERC mandated ROR operations. The author concluded that, because consistent ROR water flows from the project maintained downstream water depths suitable for spawning, greater numbers and larger sturgeon had access to new spawning habitats.

Failure to comply with ROR requirements may cause unnecessary downstream flow fluctuations resulting in downstream environmental damage for reasons previously mentioned. For example, periodic dewatering caused by an upstream hydroelectric project operating in violation with its ROR requirements was cited as a contributing factor in the decline in distribution and abundance of a small catfish, the slender madtom, in a Midwestern stream (Lynns, 1996). In one case, as a result of numerous violations of ROR requirements, with the threat of environmental damage, the Commission assessed a civil penalty of $19,000 to
a project in New York State.³

In this paper, we discuss how FERC staff views ROR requirements and outline the types of data FERC staff need to accurately monitor compliance with these requirements. We also discuss factors FERC staff may consider when reviewing compliance with ROR requirements.

What is ROR?

The term "run-of-river" is defined by Webster's Third New International Dictionary as, "Operating on the flow of the river without modification of upstream storage." Lusley and Tranzul (1979) present a broader definition of ROR by stating, "A run-of-river plant generally has very limited storage capacity and can use water only as it comes. Some run-of-river plants have enough storage (called pondage) to permit storing water during off-peak hours for use during peak hours of the same day."

Despite the varied technical ROR definitions, recently issued FERC licenses with ROR requirements include standard language explicitly defining "run-of-river" by stating, "The licensee shall operate the project in a run-of-river mode... The licensee shall at all times minimize the fluctuation of the reservoir surface elevation by maintaining a discharge from the project so that, at any point in time, flows, as measured immediately downstream from the project tailrace, approximate the sum of inflows to the project reservoir." (FERC 1992). Licenses issued before 1992 often include references to operating the project in an "instantaneous" run-of-river mode. Mandatory terms and conditions specified by resource agencies in hydroelectric exemptions issued by FERC may also include ROR requirements. However, as one would expect, the degree of specificity pertaining to ROR requirements included in project exemptions varies greatly among the resource agencies. Regardless of ROR terminology, FERC staff views ROR as operations consistent with a balanced inflow/outflow relationship and a stable reservoir elevation.

In recent years, when the necessary information was available, some FERC licenses were issued with ROR requirements including numerical bounds allowing minor deviations from predetermined reservoir elevations or minor differences between inflows and outflows. For example, a license issued for a Wisconsin project included a requirement to maintain the project reservoir within ±0.5 foot of a specified elevation to minimize fluctuations. Although the license article allows deviations of that magnitude, it also requires that the licensee

³ 49 FERC ¶ 61,140
attempt to maintain the reservoir elevation within ±0.3 foot of the specified
elevation. In addition, a Michigan hydroelectric project included an ROR
requirement allowing a ±5% difference between an upstream gage reading,
estimating inflows, and turbine outflows. Finally, in an instance where the
necessary information was not readily available at the time of licensing, FERC
established an interim ±1 foot reservoir fluctuation operational band and required
that the licensee consult with the resource agencies and file a reservoir operating
plan based on historical streamflow gaging data. Based on the licensee’s
proposed plan, the license allows FERC to establish a permanent reservoir
fluctuation band that minimizes fluctuations.  

Constraints Associated with ROR Operations

We recognize there are site-specific constraints that licensees must contend
with when operating a hydroelectric project in compliance with ROR
requirements. These constraints may necessitate changes in project operations
and/or structures to ensure compliance with ROR requirements at all times.
Some constraints associated with ROR operations include: 1) project design;
2) operation of upstream projects; and 3) installed equipment.

Some projects with ROR requirements are designed with long bypass
reaches and/or large reservoirs. When these projects suddenly and unexpectedly
trip off-line, significant decreases in downstream water flows may result as
outflows, measured downstream, fall below inflow levels. This phenomena is
often a result of a significant time lag from the time generations flows are
curtailed to the time reservoir levels rise allowing inflows to spill over the dam,
travel down the bypass reach, and restore flows downstream of the powerhouse to
levels approximating inflow. To limit the downstream effects of this time lag,
licensees may be required to alter project operations to automatically open a gate
at the dam powerhouse upon project shutdown to maintain downstream flows at
levels approximating inflows.

Operations at upstream projects may significantly affect ROR operations
at downstream projects. If an upstream project is allowed to operate in a store
and release mode, or if an upstream project deviates from its ROR requirements,
downstream projects with ROR requirements may have difficulty operating, such

4 73 FERC ¶ 61,346.
5 68 FERC ¶ 61,074.
6 72 FERC ¶ 62,182.
that inflows approximate outflows, as inflows may change often and without warning. The dynamic nature of this arrangement forces downstream operators to continually adjust project operations to adapt to the changing inflows. When several projects located on the same river are involved, downstream flow fluctuations are often amplified downstream of each project. In these instances, FERC staff encourage licensees to establish lines of communication whereby downstream projects are notified of planned or unplanned changes in inflows from upstream projects and project operations are altered accordingly.

Constraints on ROR operations also may be dictated by the type and sensitivity of equipment installed at a hydroelectric project. During low flow periods, we have observed severe downstream flow fluctuations at an ROR project in Pennsylvania caused by turbines with limited flow operating ranges and maximum hydraulic capacities approximating low flow average streamflows. Because of the "flashy" nature of the stream and the small capacity of the reservoir, turbines are constantly tripped on and off by short-term changes in streamflow.

Location and sensitivity of pressure transducers functioning as an electronic "trigger" for generation may affect consistent ROR operations. ROR projects with transducers located in a forebay or power canal isolated from the project reservoir often operate in non-compliance with ROR requirements, as the project responds to changes in forebay elevation rather than changes in reservoir elevations. Projects with transducer sensitivities set too high or too low may also have difficulty with ROR operations. In either case, severe reservoir water level and downstream flow fluctuations may result as project operations do not respond accordingly to changes in inflow.

Data Used to Determine ROR Compliance

When conducting compliance investigations of alleged non-compliance with ROR requirements, FERC staff request that licensee's provide accurate data on project inflows, outflows, reservoir elevation, and power generation. Most licenses with ROR requirements include provisions requiring streamflow gaging plans to ensure that licensees install and operate the gages necessary to provide data on water levels or stage. The plans also require that gaging data be used to develop stage-discharge relationships to estimate streamflows.

Pressure transducers, staff gages, and automatic recorders are gages commonly installed at ROR projects. Pressure transducers installed in reservoirs to control project operations are frequently used to provide data on reservoir elevations. Staff gages installed in reservoirs or upstream and downstream of projects provide data on reservoir elevation or inflows and outflows. Typically,
staff gage data are recorded manually. However, given the dynamic nature of ROR operations, it may be necessary for licensees to read staff gages at regular intervals throughout a 24 hour period to maintain an accurate record of ROR operations. Automatic recorders, on the other hand, connected to a float in a stilling well, a bubbler gage, or a pressure transducer, are capable of providing a continuous record of ROR operations. Whatever type of data are used to monitor ROR operations, FERC often requests that licensees provide evidence of calibration ensuring data are accurate.

ROR Compliance Factors

Since 1986, FERC staff have conducted numerous compliance reviews of projects based on allegations of non-compliance with ROR requirements. Because of the constraints and site-specific nature of ROR operations discussed above, FERC staff must consider a myriad of factors when reviewing a licensee’s data documenting compliance with ROR requirements. These factors include: 1) water level or flow fluctuations; 2) project operations; 3) operation of upstream projects; and 4) emergencies. Because these factors combine to portray an accurate picture of ROR operations, FERC staff employ an holistic approach to ROR compliance investigations using all four factors, whenever possible, to determine if reservoir water level fluctuations or downstream flow fluctuations are project induced.

To monitor ROR compliance, using either discrete or continuous data, FERC staff may examine the magnitude of water level fluctuations in the project reservoir. Increases or decreases in reservoir water levels are often indicative of an imbalance in the “outflow approximates inflow” ROR relationship. If ROR requirements include specified limits on reservoir fluctuations, water level readings outside these limits may be considered violations. However, in situations where there are no specified limits on reservoir elevations, FERC staff may make a determination on what constitutes “minimizing reservoir fluctuations,” in concert with licensees and resource agencies, based on historical data and local environmental conditions.

However, stable reservoir water levels, even within specified limits, may not be indicative of ROR compliance. Because of a large storage capacity, even minor water level changes in large reservoirs may result in major downstream flow fluctuations. Therefore, to gain insight into ROR compliance, FERC staff examine the magnitude and duration of changes in downstream flows whenever possible. When reviewing continuously recorded streamgaging data, FERC staff looks for dips and spikes in the downstream hydrograph suggesting periods of sudden decreases and increases in downstream flows. When reviewing discrete flow data from staff gages, staff examine the differences between inflow and
outflows. In either case, fluctuating outflows in the presence of stable inflows suggests to FERC staff that the project may not be operating in compliance with ROR requirements.

Before a final determination of compliance with ROR requirements is made, however, FERC staff examine project generation data to determine if the reservoir water level or downstream flow fluctuations, suggested by the licensee's gaging data, were induced by project operations. In cases where reservoir water levels fall below datum crest elevations, operational records are checked to determine if the project generation was responsible for the drawdown. Likewise, when reservoir elevations exceed reasonable levels, operational records are checked to determine if all available turbines were operating and if all gates necessary to pass inflows were open. In situations concerning downstream flow fluctuations, project generation data are checked against downstream flow data to see if the timing of project start-ups and shut-downs match the same general pattern as the dips and spikes in the downstream hydrograph. Finally, in instances where downstream flow data are not available, project generation data may be converted to flow data using turbine rating curves.

In one case, FERC staff, investigating a report of severe downstream flow fluctuations below a Midwestern project, examined U.S. Geological Survey streamflow data from a gage downstream of the project. Figure 1, from October 1996, shows stable flows below the project for one week while the project was off-line. Figure 2, depicting downstream flows from September 1996 during project operations, presents a highly recognizable pattern of dips and spikes, suggesting that project outflows do not equal inflows. Review of project operational records indicated that the project tripped on and off line on a daily basis. Based on this information, FERC staff found the project in non-compliance with its ROR requirements.

As previously discussed, operation of upstream projects often impose constraints on downstream projects required to operate in a ROR mode. Therefore, when FERC staff investigate allegations of flow fluctuations in a river, staff will often review operational records from several projects upstream of the alleged incident to determine which project is the source of the flow fluctuations.

Most license articles include provisions allowing licensees to deviate from ROR operations "if required by operating emergencies beyond the control of the Licensee, and for short periods upon mutual agreement between the Licensee and the (state fish and game agency)." (FERC 1992). Some licenses issued before 1992 include provisions requiring agreements with federal fish and wildlife
Figure 1. October 1996 flows below a Midwestern project while not operating.

Figure 2. September 1996 flows below the same Midwestern project during project operations.
agencies as well. These provisions are included to allow licensees to lower reservoirs for emergencies such as assisting local law enforcement with searches for drowning victims. This provision also allows licensees to lower reservoirs for maintenance activities with the consent of the state and/or federal fish and wildlife agency. Therefore, when investigating reports of reservoir drawdowns for maintenance purposes, FERC staff requests that licensees provide evidence of consultation with these resource agencies.

Conclusion

Investigations of alleged violations of ROR requirements are often complex and involve examination of several aspects of project operations. After careful consideration of the factors previously discussed, FERC staff may consider reservoir level fluctuations or any imbalance in the inflow/outflow relationship a possible violation of ROR requirements. Operating in a ROR mode should result in a reasonably smooth and uninterrupted flow of water that approximates the natural flow of the river on which the project is located. This requires that licensees install, calibrate, and operate project facilities in a manner that minimizes disturbances and distortions in streamflows.

To ensure compliance with ROR requirements at all times, licensees should continually monitor data on reservoir water level and downstream flow fluctuations and be proactive in adjusting project operations accordingly when these data suggest deviation from ROR requirements. If operational constraints preclude consistent ROR operations, we encourage licensees to confer with resource agencies and FERC staff, and implement operational or structural changes best suited for compliance with ROR requirements.

Literature Cited


GUIDANCE PURPOSE AND DISCLAIMER

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance cannot be relied upon and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes, common law and administrative rules to the relevant facts.

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A. PURPOSE

This chapter of the Handbook will discuss permits, plan approval, transfer, alterations, abandonments and dam safety. Dams may be either large or small, new or existing or on navigable or non-navigable waterways.

The first state regulation of dams was the Milldam Act. The purpose of the Milldam Act was to encourage the construction of gristmills, sawmills, and other mills by permitting the flowing of the lands of others without acquiring flowage easements for the millpond. The mills provided a service and encouraged the settlement of the state.

A milldam is any dam which was authorized under acts of the Territorial or State Legislatures specifically referring to milldams. A substantial number of milldams have been constructed in Wisconsin, most of which are in existence (approximately 280) today. Many of these dams have been constructed across what are now considered navigable waterways. The greatest concentration of milldams is found in the east and southeastern portions of Wisconsin. Most milldams are no longer used for milling purposes.

There is great energy stored in the water behind a dam. It is because of this stored energy and the dramatic environmental changes caused when dams are constructed that regulatory programs have been enacted. Dam regulations are designed to protect the public's rights and interests in the involved resource and to protect life, health and property.

Some of the changes that can occur because of dam construction are:

1. Positive and negative effects on navigation;
2. The level and flow of the stream;
3. Water quality may degrade or improve;
4. Hazards may be created to unwary members of the public who boat, fish or hike near dams;
5. Danger may be created due to poor maintenance and operation;
6. Aesthetic changes;
7. Changes may occur in the ecology of the stream;
8. The cold water fishery resources may be diminished; and
9. Flowages may create an aquatic nuisance.

Dams provide other beneficial public uses which include: maintenance of water levels, recreational opportunities (including fishing, boating and swimming), water frontage for private and public developments, fire protection, scenic beauty, and ecological diversity. Effects, both beneficial and detrimental, must be weighed in considering dam projects.

B. HISTORY

1809 1st sawmill in Wis. built on Fox River, DePere

1819 1st sawmill on the Black River

1831 1st sawmill on the Wisconsin River

1840 Milldam Act enacted by the Territorial Legislature, Wisconsin Territorial Laws of 1840, No. 48

1841 Dams on navigable streams require legislative permission, Wisconsin Territorial Laws of 1841, No. 9

1849 Milldam Act repealed, Ch. 157, Rev. Stats.

Original adoption of the Milldam Act occurred in 1840. This enactment stated that "any person may erect and maintain a water mill, and a dam to raise water for working it, upon and across any stream that is not navigable, upon the terms and conditions, and subject to the regulations hereinafter expressed." The conditions imposed included a clause protecting against interference with existing mills and provisions for compensation of any person who suffered damage due to flowing of lands by a milldam.

To encourage economic development as well as protect the public interest in the waterways, the legislature began a program of dam regulation.

1849 Milldam Act repealed, Ch. 157, Rev. Stats.

The Milldam Act was repealed in 1849. The constitutionality of the milldam act had been challenged and litigation reached the Wisconsin Supreme Court in 1849.

In Newcomb v. Smith, a sharply divided Supreme Court upheld the constitutionality of
the Milldam Act. The majority decided that the Act could be upheld if the lands flowed were appropriated for a purpose which promotes the public interest. The majority decision noted that water mills were a public benefit, "especially in a new country," and that numerous other states had adopted similar milldam acts which had withstood attack.

There was a lengthy and vigorous dissent filed in the case. The dissenters argued that the Milldam Act was invalid because the Legislature "neither declared in the act itself, nor ascertained in any manner that the seizure is for the 'public use'."

### 1854

**Thien v. Voegtlander**, 3 Wis 411 (1854)

The constitutionality of the Milldam Act was again sustained; private property cannot be taken for the use of the public unless compensation is made to the owner.

**Pratt v. Brown**, 3 Wis 532 (1854)

In 1854, another suit reached the Wisconsin Supreme Court which concerned the Milldam Act. In **Pratt v. Brown**, the Court dealt with an action concerning a complaint by an individual whose property continued to be flooded by a dam which had been constructed under the Milldam Act. The Court determined that the right to flow which had been granted by the Milldam Act was lost when the Milldam Act of 1840 was repealed in 1849.

### 1857

**Milldam Act revived under Chapter 62, Laws of 1857**

The Milldam Act of 1840 was "revived".

### 1858

**Milldam Act repealed and recreated.**

The Milldam Act, as a session law was repealed by Chapter 191, Revised Statutes of 1858 and recreated as Chapter 56 of the Revised Statutes of 1858.

### 1860

**Fisher v. Horicon Iron and Mfg. Co.,** 10 Wis 293 (1860)

The court, in **Fisher v. Horicon Iron and Mfg. Co.,** stated it would overrule the Milldam Act if it were not for precedent and economic benefits. Holds that Milldam Act is constitutional.

### 1863

**Woods v. Hustis**, 17 Wis 416, 417-418 (1863)

Streams, legally declared navigable, are public highways

### 1877

**Olson v. Merrill**, 42 Wis 203 (1877)

A stream that is navigable at recurring times is navigable. Establishment of the sawlog test.
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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</thead>
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<tr>
<td>1897</td>
<td>Smith v. Youmans, 96 Wis. 103 (1897)</td>
</tr>
<tr>
<td>1901</td>
<td>Milldam Act amended</td>
</tr>
<tr>
<td>1908</td>
<td>Allaby v Mauston Electric Service Co., 135 Wis 345</td>
</tr>
<tr>
<td>1909</td>
<td>Legislative committee formed to study State's resources</td>
</tr>
<tr>
<td>1909</td>
<td>Johnson v Eimerman, 140 Wis 327 (1909)</td>
</tr>
<tr>
<td>1910</td>
<td>Water Resources Study authorized by Legislature</td>
</tr>
<tr>
<td>1911</td>
<td>Milldam Act amended (Chapter</td>
</tr>
<tr>
<td>1911</td>
<td></td>
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</table>
Failure of the Hatfield Dam, Black River Falls

533 Laws of 1911) further restrict the construction of dams under the Act to streams "not navigable in fact for any purpose whatsoever...". Previous enactments of that act applied to streams "not navigable." The 1911 amendment was designed to exclude streams that were navigable in fact (although not navigable under previous statutes since they were not meandered) and also streams which legally had been declared navigable as public highways. Woods v. Hustis, 17 Wis. 416, 417-418 (1863).

1917  Chapter 31 created

The Milldam Act was entirely rewritten, consolidated with the Water Power Law to form Chapter 31 and placed under the Railroad Commission's jurisdiction in 1917. The 1917 enactment created a licensure provision that is nearly identical to the current version of s. 31.33(2) (1979) (Chapter 474, Laws of 1917).

The State's treatment of dams evolved along with the definition of navigability. As the definition of navigability came to encompass more waterways, more dams and dam sites came to be regulated.

1919  Milldam Act amended

The Milldam Act was amended in 1919 to reflect the repeal of the eminent domain provisions of s. 31.14 (1917), and the placement of those provisions in Chapter 32 (Chapter 571, Laws of 1919).

1921  Milldam Act amended

The Milldam Act was amended in 1921 to reflect the Act's regulation and control provisions applicable to mills and milldams lawfully constructed or erected under the Revised Statutes of 1878, Chapter 146 (Chapter 422, Laws of 1921).

1928  Baraboo v. Railroad Commission, 195 Wis 523 (1928)

Reaffirms state regulation of dams.

1929  Flambeau R. Lumber Co. v Lake Superior District Power Co., 200 Wis 31 (1929)

The regulation of the use of navigable streams for water-power purposes does not attempt to curtail the public rights of navigation.

1930  Nekoosa-Edwards Paper Co. v Railroad Commission, 201 Wis 40 (1930)

Order of PSC denying permit for dam in Four Mile Creek. Discussed history of water law. What is "navigable water". Rights of riparians on navigable streams.

1933  Haase v Kingston Co-op Creamery

Public use of navigable artificial waters can
<table>
<thead>
<tr>
<th>Year</th>
<th>Case</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1933</td>
<td>Association, 212 Wis 585 (1933)</td>
<td>legally become a natural condition and the public develops interests and rights in the waterway.</td>
</tr>
<tr>
<td>1936</td>
<td>Trout Brook Co. v Willow River Power Co., 221 Wis. 616 (1936)</td>
<td>Duty of dam owner to operate dam so upper and lower riparians are not injured. Dam need only be constructed for normal floods.</td>
</tr>
<tr>
<td>1937</td>
<td>New Lisbon v Harebo, 224 Wis 66 (1937) Sec. 31.06</td>
<td>In New Lisbon v Harebo, the court found that the City must acquire PSC permit to construct a dam before condemnation proceedings.</td>
</tr>
<tr>
<td></td>
<td>Mellen Granite Co.</td>
<td>The PSC, in 1937, reviewed an application from the Mellen Granite Company for a permit to construct, maintain and operate a dam on the Potato River in Iron County for the purpose of generating hydroelectric energy for manufacturing steel shot. The Commission denied the application, stating that the advantages will be outweighed by the fact that &quot;...the water falls and cataracts for about one mile of river will be forever destroyed.&quot; This is the first instance where an application was denied in the cause of aesthetics.</td>
</tr>
<tr>
<td>1943</td>
<td>State ex rel. Priegel v Northern States Power Co., 242 Wis 345 (1943)</td>
<td>The court ruled that 25% of the natural flow must pass through a dam to protect downstream riparian owners. A dam is defined as any part of a dam; that is, the structure itself across the river, the millrace, canal, or pond.</td>
</tr>
<tr>
<td>1944</td>
<td>Burkman v New Lisbon, 246 Wis 547 (1944)</td>
<td>Prescriptive right to flow can be abandoned by non-use. Prescriptive use for milldam cannot be extended to maintenance of flowage for park.</td>
</tr>
<tr>
<td>1948</td>
<td>Jones v Wisconsin Michigan Power Co., 252 Wis 280 (1948)</td>
<td>Defendant's right to lower water; and interpretation of dam maintenance.</td>
</tr>
<tr>
<td>1949</td>
<td>Milldam Act amended,(Chapter 125)</td>
<td>Broadens the Act's regulation and control provisions beyond milldams to all dams on non-navigable streams.</td>
</tr>
<tr>
<td>1952</td>
<td>Muench v PSC, 261 Wis 492 (1952)</td>
<td>The right of the citizens of the state to enjoy our navigable streams for recreational purposes, including the enjoyment of a scenic beauty, is a legal right that is entitled to all the protection which is given to financial rights.&quot;</td>
</tr>
</tbody>
</table>
1958  **Wis. Power and Light v PSC, 5 Wis. 2d 167 (1958)**  
Setting of a water level is not a taking and is a proper exercise of police power. Section 31.02 applies to dams maintained before and after enactment. The provision of s. 31.34 that at least 25% of natural flow must be passed by a dam only sets a minimum, not a standard.

1961  Transfer and alteration permit system established  
The permit system was established to resolve two problem situations. Power companies were selling dams to municipalities that often had insufficient funds and expertise to maintain them and developers were building dams to create flowages, selling lots on the flowage and later refusing responsibility for the dam. No owner of any dam may abandon, remove or alter the dam without first obtaining a permit from the department.

1969  **DNR created**  
Transfers jurisdiction over dams from the PSC to the DNR.

1971  **DNR v Clintonville, 53 Wis. 2d 1 (1971)**  
The Court ruled that the act of lowering the level of a pond without permission of DNR was not prohibited by Chapter 29. Therefore, violation of s. 31.02 does not establish cause of action for damages under s. 29.65.

1973  **Capt. Soma Boat Line, Inc. v City of Wisconsin Dells, 56 Wis. 2d 838 (1973)**  
The Circuit Court of Dane County, in Theodore Sawle v. Wisconsin Department of Natural Resources, made a determination on May 7, 1973, regarding the validity of the Milldam Act authorization to dams which are not presently used for public purposes as defined by the Milldam Act. The Milldam Act and various court decisions have recognized that gristmills, sawmills, or other mills are public businesses, and that the state may exercise its sovereign power of eminent domain through the agency of the mill owner in acquiring the flowage rights for use of the public mill. The generation of electric energy and the distribution of such energy for light, heat, and power purposes is also a public purpose under the terms of the Milldam Act. The Sawle decision states that a
dam which was originally authorized by one of the several Milldam Acts and which is abandoned (drawn down) and no longer used for the purposes enumerated above is no longer authorized by the Milldam Act and must receive further approval from the department under Chapter 31. Dams built prior to the Water Power Act of 1911 which were not authorized under the Milldam Acts require authorization under Chapter 31, if the present or previous owners of the dam did not obtain prescriptive rights to flow the lands of others prior to 1911 or if it can be documented that the original use under which prescriptive rights were obtained has been discontinued subsequent to 1911 for a period greater than 10 years. Prescriptive rights may have been secured for another purpose however, if the flowage was maintained for twenty years since 1911 and no legal action has taken place to sue for damages.

Substantive evidence in the record to support DNR's issuance of dam permit.

Daly v Natural Resources Board, 60 Wis 2d 208, Certiorari denied 94 S. St. 883, 414 U.S. 1137, 38 L. Ed. 2d 763 (1973)

1975 DeGayner & Co., Inc. v Department of Natural Resources, 70 Wis 2d 936, 236 N.W. 2d 217 (1975)

A stream is navigable if it is navigable in fact at recurring times each year long enough to make the stream useful as a highway. Existence of beaver dams on a stream for 37 years is a natural condition.

The Natural Resources Board adopted a policy on milldams in 1976 after the Dane County Circuit Court decision in Sawle v. DNR (1973). The policy stated that Chapter 31, be applied to all milldams which are no longer legally authorized under the Milldam Act. It also stated that in determining whether authorization is to be granted to the owner of the milldam, the department shall use the standards of 31.06(3). This board policy has since been rescinded.

Although the Sawle decision made very clear policy for dams where the pond levels have not been maintained for a period of time greater
than 10 years, Department staff have had great difficulty in dealing with milldams and s. 31.33.  The problems arise with milldams that have stopped milling many years ago, but still maintain a pond. The workload to have all the existing dams reauthorized would be staggering; therefore, we have not normally requested reauthorization. Many of these dams have had PSC and DNR decisions relating to transfers, levels, repairs, etc., where there was no mention or question of authority for the dam. These decisions would tend to support a "color of authority" for these dams.

**1979**  
NR 330 created  
NR 330, Warning Signs and Portages for Dams, was created as an emergency rule.

**1981**  
31.185 amended, 710.11 created  
A person may not accept the transfer of the ownership of a specific piece of land on which a dam is physically located unless the person complies with s. 31.14(4).

**1985**  
NR 333 created  
Established criteria for design, construction and reconstruction of dams to minimize danger to life, health and property, pursuant to ss. 31.02(2), 31.19 and 31.33.

**1987**  
NR 335 created  
Created originally to establish a fee system pursuant to s. 31.20 for inspections of dams and reservoirs conducted by the department under s. 31.19.

**1989**  
Tenpas v. DNR, 148 Wis. 2d 579, 436 NW (2d) 297 (1989)  
The court found that "s. 31.14(4) provides the DNR with regulatory power over dams generally, with the exception of cranberry dams...Although public safety is a concern of the state, the DNR presents no authority suggesting that the legislature has delegated to the DNR the power to regulate safety hazards created by cranberry dams." The court also held that "the specific legislative treatment of cranberry growers under s. 94.26, precludes application of the general financial responsibility requirements of ss. 710.11 and 31.14(4), to cranberry dams."

**1990**  
NR 335 recreated  
NR 335 was repealed and recreated to establish procedures for implementation of the dam maintenance, repair, modification, or abandonment and removal aid program. Fee system repealed.
C. MECHANISMS

1. NEW DAMS ON NAVIGABLE STREAMS.

Section 31.05 provides for permitting of new dams on navigable streams. Section 31.04 allows the permit to be granted to a corporation, a municipality or a private individual. Section 31.02 (water levels, flow, benchmarks and appurtenances), and s. 31.34 (low flow requirements) must be considered. Proposed dams on navigable streams require a public notice and the opportunity for a public hearing under s. 31.06. Section 31.14 requires financial responsibility be demonstrated. Once a permit is secured, s. 31.12 requires dam plan approval. Section 31.18 requires that trees and brush be removed prior to flowing the land.

2. NEW DAMS ON NON-NAVIGABLE STREAMS.

No permit is needed to construct a dam on non-navigable waters. However, s. 31.33 references s. 31.12 requiring only plan approval for dams on non-navigable streams. In the plan review, s. 31.02 (water levels, flow, benchmarks and appurtenances) must be considered. A s. 30.19 permit may be required if the dam is within 500 feet of a navigable stream. A ch. 30.20 (dredging) permit may be required if there will be materials removed from the creek channel.

3. AUTHORIZING DAMS BUILT PRIOR TO 1915.

Sections 31.07 and 31.08 have been set up to authorize dams built before passage of the 1915 Water Power Act but not authorized under the Mill Dam Acts. This procedure applies to pre-1915 dams on navigable streams as well as streams which were considered non-navigable at that time. These sections provide for an application and hearing process.

4. REGULATION OF EXISTING DAMS.
   a. Water Levels and Flow

   Section 31.02 gives the Department the authority to regulate the water levels and flows. The Department may require benchmarks to reference the water levels and flows.

   Section 31.34 provides for minimum flows from a dam. Dams must pass at all times at least 25% of the natural low flow which has been administratively set as $Q_{3,10}$. This does not apply to dams that discharge into a lake or flowage or where the department has determined that the minimum discharge is not necessary to protect fish life. This section also provides a fine for the violation of the minimum flow requirements.

   b. Appurtenances

   Section 31.02 authorizes the department to require appurtenances including locks, fishways, flood gates, and booms to protect the public interests.

   c. Transfer

   Section 31.14 requires dam transfer permit applicants to demonstrate financial responsibility to ensure dam construction, maintenance and repair for a minimum of 10 years. A municipally-owned dam may not be transferred to a private individual or foreign corporation according to s. 31.21. Section
31.185 states that no person may transfer ownership of a dam or the ownership of the piece of land on which a dam is located without first obtaining a permit. Section 710.11 of the real estate laws requires that the transfer of any parcel of land containing a dam (large or small, on navigable or non-navigable) must follow s. 31.14. Section 31.38 provides a mechanism for financing municipal dams.

d. **Alterations including Raising, Enlarging and Adding Hydropower**

   Section 31.13 sets up a permit procedure allowing dam owners to raise and enlarge their existing dams. This process is intended to protect both public and private rights in the present impoundment and follows the same permitting procedures as new dams.

   Section 31.18(1) requires owners to maintain their dams in a state of good repair. This paragraph also requires that an owner seek approval of the Department prior to willfully destroying or removing any part of their dam and allows the Department to issue emergency repair orders without notice or hearing.

   Section 31.18(3) forbids substantial alterations or additions unless those alterations are ordered by the Department.

e. **Abandonment**

   Section 31.18 provides abandonment procedures for dams authorized by s. 31.33, Mill Dam Act and Legislative grants.

   Section 31.185 requires a permit to abandon a dam initially authorized under s. 31.06 or 31.08. This includes a public notice and hearing if necessary. A 120 day waiting period is provided if there is an objection to the abandonment.

   Section 31.187 provides the Department with authority to remove dams that have been abandoned. Prior to the Department removing the dam, s. 31.253 requires a public notice and/or informational hearing unless it is an emergency.

f. **Dam Safety Inspections**

   Section 31.02 allows department staff free access to dams, lakes and streams for investigation. Under s. 31.19, the Department may inspect any dam but is required to inspect all large dams on navigable streams, with the exception of federally inspected dams, at least every 10 years.

   Insufficiencies found during an inspection can be remedied through orders pursuant to ss. 31.19(5), 31.02, 31.18, and 31.185.

g. **Milldams and Dams on Nonnavigable Streams**

   Section 31.33 establishes the jurisdiction of the department in addressing mills and milldams. As with other dams, this section cites ss. 31.02 (levels and flows), 31.12 (plan approvals), 31.18 (operate and maintain), 31.19 (inspection), 31.25 (public nuisances), and 31.26 (civil liabilities) as applicable regulatory statutes.

h. **Cranberry Dams**

   Section 94.26 exempts cranberry dams from the regulations in Chapters 30 and 31. This was confirmed in the Supreme Court Decision Tenpas v. DNR which upheld the ruling that s. 31.14 did not
apply to dams used in cranberry production. (Also see Handbook Chapter 180)

i. **FERC-Regulated Dams**

To determine the Department's authority on Federal Energy Regulatory Commission (FERC) regulated dams, the articles of the license must be reviewed. FERC generally supersedes Chapter 31. In some cases, FERC provided for DNR involvement in the license articles. Dams receiving a FERC exemption are considered to be under department jurisdiction.

j. **Grants**

Section 31.385 set up the dam maintenance, repair, modification, abandonment and removal grant program. The program provides 50 - 50 cost-sharing, up to $200,000, to municipalities and public inland lake protection and rehabilitation districts for dam repair or removal. In 1989 the legislature provided $2.5 million in funding, and in 1991, an additional $3 million was added to the program.

k. **Fees**

Section 31.39 provides a fee schedule for the department to charge to carry out permit and approval duties.

l. **Enforcement**

Section 30.03(2) provides for enforcement proceedings through the local district attorney's office and local courts.

Section 30.03(4) provides for the Department to hold a hearing and issue an order to direct responsible parties to refrain from performing acts which would be an infringement of public rights.

Under s. 30.15(1)(b) it is unlawful to place in navigable waters "any substance that may float into and obstruct any such waters or impede their free navigation." Section 30.15(2) would appear to provide an exception for "the floating or movement of logs or timber in navigable water". However, that exception dates back to the early history of our state when navigable streams were used for driving logs to mills and should not be stretched to immunize the passing of potentially hazardous semi-floating logs by dam owners.

Under s. 31.02(2) the operation of dams in navigable waters is subject to the supervision and to the orders and regulations of the Department made or promulgated under Chapter 31. The Department may investigate and determine reasonable methods of operation to protect public rights in navigable waters and to protect life, health, and property.

Under s. 31.18(4) the Department may order the grantee of any permit under Chapter 31 to remove fallen timber.

Section 31.23 provides forfeitures for dams of $50/day for violations and up to $1000 for violation of an issued order. Dams in violation of Chapter 31 are declared public nuisances and may be abated under s. 31.25.

Section 31.26 states that dam owners are subject to civil liabilities for damages caused by the dams.
D. STANDARDS

1. ABANDONMENT. Dam removal standards can be found in s. 31.18 for dams authorized by s. 31.33, the Mill Dam Acts and legislative grants and s. 31.185 for dams authorized under sections 31.06 and 31.08. Although s. 31.18 requires approval and s. 31.185 requires a permit, the statutory standards are almost identical.

Our general policy requires the removal of all structures regardless of whether they were originally below the OHWM. The Department may allow a portion of the structure to remain if the owner can demonstrate that it will not be hazardous.

a. Our specific statutory standards to consider are:

1) Protection/preservation of public rights in navigable waters. The public has a right to wade, swim, fish, boat, enjoy scenic beauty, and all other incidents of navigation.

These rights are commonly associated with the normal use of the river during normal stream flow. Protection of these rights require, at a minimum, removal of all structures below the natural OHWM (e.g. before the dam was in place).

2) Promote safety (only in s. 31.185)

As many hazardous or attractive nuisances as possible should be eliminated from any remaining structures. If a structure cannot be made safe it should be removed regardless of impact to flood flows or its relationship to the river. Excessively steep slopes should either be flattened or fenced and signed. The profile of the stream bed should also be considered and it’s danger to waders or fisherman assessed.

3) Protection/preservation of life, health and property

Some of the same kinds of concerns listed in item b should be considered under this standard. In addition, the effect any remaining structures will have on flood flows and the potential for downstream damage from failure during such flood flows must be assessed. If an owner wishes to retain portions of the structure, above the OHWM, (s)he must show:

a) That the structure will cause no more than two feet of backwater during the regional flood.

b) That the remaining structure will be stable during the regional flood.

c) That rights to flow areas inundated by the structure during the regional flood have been retained or acquired.

b. Generally the applicant should be required to provide any technical hydrologic/hydraulic analysis. For very small removal projects (under $125,000) the Department may provide technical help. Analyses should include the following:

1) An estimate of the 100 year flood in accordance with the standards of NR 116.07(3).
2) A profile of the regional flood with the dam in place considering the routing effects of the dam.

3) A profile of the regional flood, both upstream and downstream, without the dam in place.

4) A comparison of the above two profiles to the point of convergence downstream.

5) A delineation of the 100 year flood with the dam removed covering the area of convergence shown in item d above.

Downstream easements for additional flooding caused by dam removal are not required before we allow abandonment. To do so would require the owner to perpetually maintain a benefit to downstream properties.

c. A sediment control plan consisting of an explanation of what's there and how the owner intends to stabilize the bed after removal should be required. This plan should include the following items:

1) Existing bed contours.

2) Grading proposals.

3) Seeding plan.

4) Necessary riprap

5) Drawdown procedure.

Sediment sampling may be required. The number of samples and chemicals tested should be case specific (consult with district dredging coordinator). In some cases where we have no real indication that the sediment could have been contaminated we may require no testing. Refer to NR 347 for specifics.

2. ALTERATIONS.

Section 31.185 establishes the permit and notice procedure. The procedures of s. 31.18 which does not require a notice procedure should generally be used for alterations which are not likely to impact the riparian rights of landowners on the impoundment. Section 31.13 provides a procedure to permit the raising or enlarging of a dam. Section 31.21 requires the department to approve leases longer than 10 years for hydroelectric generation.

The Department may issue orders approving alterations under s. 31.18, or order alterations, additions or repairs under s. 31.19.

Section 31.185 does not apply to dams authorized under s. 31.33.

3. ARTIFICIAL FARM DRAINAGE DITCHES.

Section 30.10 was changed on May 7, 1982, to say that farm drainage ditches which are non-navigable streams prior to ditching were declared to be not navigable. Prior to this change, if an farm drainage ditch could be navigated it was considered to be a navigable stream.
This change raises several issues that need to be addressed for the following fact situation: Several permits under s. 31.05 were issued to construct dams on a farm drainage ditch, which was a navigable stream, prior to the law change. Subsequent to the statutory change, several dam plan approvals pursuant to s. 31.33 were issued on the same "stream" (now a nonnavigable farm drainage ditch), in the same vicinity, and in some cases, to the holders of previous dam permits. The permits and plan approvals contained a condition that any future transfer of ownership must comply with the requirements of s. 31.185. The "stream" has no history of public use. The flowages created by the dams are entirely on privately owned parcels of land which have no public access.

The issues to be addressed are:

a. The "stream" on which some of the dams were permitted is now considered nonnavigable. The flowages are now nonnavigable private waters since the legislature affirmatively removed this class of "stream" from classification as navigable waterways.

b. It was correct to issue plan approvals for dams built after the 1982 legislation even though they were constructed across parts of the originally permitted navigable flowages. At the time these approvals were issued, the flowages were considered to be nonnavigable and private due to the change in the law.

c. The conditions of the original permits and later plan approvals should be revised to eliminate the requirement to comply with s. 31.185. Only those statutory sections directly referenced in s. 31.33 apply to plan approvals issued under that section (except, of course, s. 710.11 and its redirection to s. 31.14). In the case where permits were issued, the proper course of action would be to rescind the permits and reissue plan approvals pursuant to s. 31.33 and eliminate the requirement to comply with s. 31.185. This might seem like an unnecessary action, but given the legislative intent to limit jurisdiction for such "streams" and the current fact situation, the permit really unlawfully restricts the landowner's rights. Any activity to change ownership prior to making these permit and approval changes should only be regulated by s. 710.11.

4. **BOATING SAFETY.**

NR 330 requires dam owners to place certain types of signs and devices to warn of dams and to provide and identify portages around dams. NR 330 also requires the Department to inspect dams and issue orders for signs and other devices to warn boaters of danger around dams, as well as portage facilities where appropriate.

5. **COMPLETION DEADLINES.**

Section 31.11 allows 5 years plus a 2 year extension for good cause to construct dams on navigable streams. While appropriate for large dams on navigable streams, this period of 7 years is not appropriate for the typical small dam on a nonnavigable stream authorized by plan approval. A 3 year period should be sufficient to allow for construction of a small dam.

If an approved dam was not constructed within the established time period, the districts should write the owner a letter stating that the approval has expired. The bureau should receive a copy of the letter so that an appropriate adjustment to the authority index and dam inventory can be made. An extension of the authority for a period not to exceed 3 years may be approved if the request is received before the expiration of the original approval.

6. **DAM FAILURE ANALYSIS.**
NR 333.05 (2)(b) requires the submittal of a dam break analysis. All new dam break profiles should be based upon failure of the dam during the 100 year flood. Failure should be assumed to occur at the maximum pool possible during the regional flood or upon overtopping of the dam. A technical description of the assumptions used to develop a dam break profile should be included.

Study standards for dam break analyses are an item of great concern for our technical staff. These standards are likely to change and expand as program staff acquire more background knowledge. However, for the immediate future we will apply the following general study standards:

<table>
<thead>
<tr>
<th>Urban Areas</th>
<th>Rural Areas</th>
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<tbody>
<tr>
<td>Minimum X-Section</td>
<td>1000 ft</td>
</tr>
<tr>
<td>Spacing</td>
<td>1-2 miles</td>
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<tr>
<td>Accuracy of X-Section</td>
<td>± .1 ft</td>
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<td>Taken from</td>
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<td>7.5 min. quadrangle</td>
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<td>Acceptable Methodology</td>
<td>DAMBRK,</td>
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<td></td>
<td>HEC1/HEC2</td>
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<tr>
<td></td>
<td>Simplified DAMBRK</td>
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<tr>
<td>Limits of Dam Break Profile*</td>
<td>Entire community to within</td>
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<td></td>
<td>0.0' of the regional flood</td>
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<td>within the limits of the</td>
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<td></td>
<td>the limits of the community;</td>
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<tr>
<td></td>
<td>to within 1.0' of the regional flood</td>
</tr>
<tr>
<td></td>
<td>computed without the dam in place</td>
</tr>
<tr>
<td></td>
<td>outside of the community limits.</td>
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</tbody>
</table>

*The delineation of the dam break profile may stop within 1.0' of the regional flood but the analysis should extend downstream in order to take in the effects of downstream control sections such as bridges, dams or other river systems. If there is an existing Flood Insurance Study in-place, then the delineation of the dam break profile should continue at least as far as the study limits or until the profile merges with the 100-year profile.

The recommended discharge to be used flowing into the reservoir should generally be $Q_{100}$ assuming all upstream dams are functioning as designed. However, in some cases, it may be more appropriate to consider all upstream dams to have been removed. The value of $Q_{100}$ used to delineate the regional flood profile with the dam nonexistent should be the same as the peak reservoir inflow with no attenuation included for reservoir storage.

The minimum documentation required in a Dam Failure Analysis Report is as follows:

a. A narrative, including:

1) A statement of the purpose for which the analysis was performed.

2) A summary of discharge values and flood elevations at distinctive geographic points.

3) Specification of the version and program used.
4) Type of Dambreak "option" used in the analysis.

b. A hydrologic study, including:
   1) A detailed description of the methodology and parameters used to obtain the inflow hydrograph.
   2) A plotted inflow hydrograph.
   3) A listing of the peak discharges used in the dam failure analyses which must be formulated consistent with the acceptable standards for peak discharge determinations found in Wis. Admin. Code NR116.07(3). A minimum of two independent methods of calculating the 100 year peak discharge must be used. In cases where a local community has adopted a Flood Insurance Study (FIS) or floodplain study into a local floodplain zoning ordinance, the peak 100 year inflow from the flood study must be used in the dam failure analysis unless the 100 year flood discharge and the entire FIS are revised.
   4) Hydrograph plots at the downstream face of each dam (model plots are acceptable).

c. A hydraulic study, including:
   1) A description and a cross sectional plot of the dam. The cross section should be as viewed from downstream and must include all pertinent elevations (sill, top of gates, spillway, embankment, etc.) and the assumed breach geometry. Describe assumptions used regarding dam operations (i.e. gates open, stoplogs removed, flashboards failed, etc.).
   2) Any rating curves (elevation vs. discharge) used for the gates, spillways, etc.
   3) Stage/storage curves or tables for the reservoir(s) when level pool routing is used.
   4) Breach parameters and justification for their use. A statement describing the results of a sensitivity analysis of the breach parameters must be included.
   5) Any problems encountered in the modeling as well as a list of the techniques used to resolve them.
   6) Plots of all input cross-sections used in the Dam failure analyses (surveyed left to right looking downstream). Plot the surveyed cross sections overlaid with the Dambreak cross section approximations used as input into the model. Specify the section locations and how they were determined. If x-sections are translated from a FIS, a table should be included to equate the x-section identifiers for each study.
   7) Plots of bridge openings (both actual and input data). When applicable, option 12 of the NWS DBRK model, version 1988 should be used to model bridges.
   8) All documentation to justify Manning's "n" values used in the analysis (photographs, method used to obtain composite "n" values, etc.).
   9) For each run, a) 100 year failure of the dam; b) 100 year with the dam in place; and, c)100 year without the dam, the following information will be required for Department review:
i) Two (2) copies of maps for each of the dam failure conditions above. Each map must contain a title and date, map key, map scale, north arrow, hydraulic shadow, floodway/floodfringe/storage areas, cross-sections labeled, and enough contour information to verify the floodplain limits. Each map must be adequate for administration in local floodplain zoning regulations.

ii) Two (2) plotted hydraulic profiles with pertinent cross sections and bridges labeled, and stream inverts.

iii) Two (2) separate floodway data tables (the data table must include the cross section identifier (number or letter), distance description (feet or miles), floodway top width, water surface elevations, and peak discharges).

iv) Hydrograph plots at the downstream face of each dam (model plots are acceptable).

d. Appendices and follow up information, including:

1) A 3 1/2 inch diskette which includes all input/output including hydrologic models and dam failure analyses (for NWS DAMBRK, JNK =9 output is required on disk). This diskette must also include an index file which identifies each file.

2) Dam failure output in hardcopy format. When using the NWS DAMBRK model an output control parameter of 5 is typically recommended. The hardcopy must also include reservoir depletion tables (if used) and flood crest summary information.

3) Structure identification and inventory (with first floor elevations) downstream of the dam adequate to determine its hazard rating and for preparation of an emergency action plan (EAP). Include a statement as to the dam's proposed preliminary hazard rating based on this information and the criteria outlined in NR333.

4) Copies of survey information (field notes) used. Descriptions and locations of benchmarks used should be included on the map. Elevations used in the analysis must be to USGS (NGVD) datum.

5) Copies of pertinent coordination letters with DNR, community officials, other agencies, etc.

6) Upon approval of the dam failure analysis by the Department, one additional copy of the study documentation and a total of 3 copies of each map/profile/floodway data table plus 2 additional copies for each community impacted by the failure analysis must be submitted to the Department. Colored maps are not acceptable since they can not be easily reproduced.

7) Copies of the registered letters sent to all communities effected by the dam failure analysis.

7. **DEBRIS REMOVAL AT DAMS.**

Requiring dam owners to remove floating logs or other debris rather than passing the material downstream can be addressed under ss. 30.03(2), 30.03(4), 30.15(1)(b), 31.02(2) or 31.18(4). Generally, if dam owners touch the logs or debris, they must remove it.
8. DESIGN OF DAMS.

Included in NR 333 are informational items for hydraulics, hydrology, stability analyses, dam hazard ratings (based on existing land use and land use controls), spillway capacities, and operation, inspection, maintenance and emergency action plans. Further detailed discussion of these items is provided under other subsections of this chapter. Plan submittal requirements are listed in NR 333.05.

Large dams are defined as those with either structural height greater than six feet and maximum storage capacity of at least 50 acre feet, or structural height greater than 25' and maximum storage capacity of at least 15 acre feet. The design of these dams must be signed and their construction supervised by a professional engineer registered in Wisconsin.

9. EASEMENTS.

Chapter 31 permits and plan approvals require flowage easements for the upstream area. The applicant for a new or modified dam must obtain easements or appropriate legal arrangements prior to construction from all property owners affected by increases in flowage and flood elevations up to the 100-year flood elevation with the dam in place. Local floodplain zoning ordinances require that map amendments be obtained when a change in profile occurs and zoning is in effect for the stream in question.

a. The mechanism for ensuring compliance with these requirements should be the provisions of the permit or plan approval. Permit conditions and actions are:

   1) Privately owned dams. Section 31.05 requires that private applicants acquire at least 65% of the land to be flowed prior to submitting an application to construct a dam. The permit process may be streamlined by requiring that remaining easements be obtained as a condition of the permit, but must be completed before construction commences. Private owners should obtain easements for lands covered by both the normal pond and 100-year flood.

   2) Publicly owned dams. In this case, title to the affected lands could be obtained by condemnation, if absolutely necessary. If the dam is owned by a public body, the easements for the pond and the easements for any increased flood elevations caused by the dam should be a requirement of the permit. Such easement must be in place or condemnation proceedings must be commenced prior to construction.

Responsibility for maintenance and proper operation of the gates rests solely with the dam owner. However, there are numerous examples of dams where the gates have not been operated in years and would require extraordinary effort to get the gates into an operable condition. There are also numerous examples of dams which have failed where the gates were routinely operated, were in good condition, but failed to operate during a flood due to debris or ice.

Unless the owner can demonstrate conclusively that the gates will operate, our standard policy for evaluating the 100-year flood elevation for regulatory purposes should be based on the premise that all gates are closed.

b. Criteria for adequate gate operation should be documentation of all of the following:

   1) Gates are presently in working order.

   2) There is no history of difficulties in operating the gates during flooding events.
3) An adequate operation plan for flooding events is written and implemented which assures operation of the gates 24 hours a day.

10. EMERGENCY ACTION PLANS.

Emergency Action Plans (EAP) are a requirement of NR 333.07(4)(c). An EAP is a document prepared for a specific dam, describing the actions taken to prevent loss of life and minimize property damage in the event of a dam failure. The EAP should include all instructions for a dam operator to follow during an emergency, written in a clear and precise manner.

During its development or upon completion, each EAP should be discussed with local community leaders or the people directly responsible for the well-being of the local residents. Federal and state agencies affected by an emergency should also be contacted. NR 333 requires an EAP to be prepared in consultation with the local unit of government and with concurrence by the Division of Emergency Government (DEG).

Documentation of this consultation should be submitted prior to unconditional approval of an EAP. If such consultation has not yet occurred, an approval letter from the Department may be issued conditioned upon completion of the consultation. Since DEG's standard operating procedure includes consultation with the local unit of government, an approval memorandum from the DEG area office will sufficiently document consultation.

Local officials should be clearly aware of the hazard potential a dam failure would present and each plan should include warning system and communication procedures to warn downstream residents. Each plan should also include inundation maps, as determined by a dam failure analysis.

The EAP should include a purpose statement, a description of the dam, a list of the name(s) of the person or organization responsible for the operation and maintenance of the dam, a schedule for updating and testing the plan, and a map of the hazard area (the delineation of the hydraulic shadow). Particular attention should be paid to emergency actions which can be performed despite loss of electrical power and telephone service.

The format and other informational requirements of the EAP should be consistent with the February 1985 Federal Emergency Management Agency (FEMA) Publication, "Emergency Action Planning Guidelines for Dams." See attachment #3 for a suggested outline for emergency action plans taken from the FEMA publication.

EAPs, in general, require profiles for the hydraulic shadow (the dam failure floodplain), the regional flood (usually the 100 year floodplain) and the dam non-existent conditions. In rural areas, the profiles of the hydraulic shadow and the regional flood with the dam non-existent should converge to within 1.0 foot. In urban areas, the profile of the hydraulic shadow and the regional flood profile should converge to within 0.00 feet within the community limits. If the two profiles do not converge within the community limits, the rural criteria govern.

In cases where a flood insurance study exists downstream of a dam and the flood insurance study was based on the dam in-place condition, the hydraulic shadow should continue at least as far as the study limits or until the profile merges with the 100 year profile computed with the dam in place.

For dams in series an EAP for the entire watershed will be developed by the independent development of EAPs for all unsafe dams (under capacity or physically impaired) and all safe High Hazard dams.
Therefore, in developing an EAP for a specific dam, a dam break analysis for that dam would not need to include an analysis of failure of dams upstream but should include analysis of the impacts the failure of the dam in question would have on dams downstream.

Although we will not analyze upstream dam breaks, the EAP should speak to the status of upstream dams. Can the upstream dam reduce stress on the failing dam or reduce impending flood waves by storing water?

While a dam failure analysis may need a distinction between floodways and flood fringe areas to comply with the informational requirements of NR 333.05(2) for construction of a new dam or reconstruction of an existing dam, it is not necessary that it be included in an EAP to satisfy the safety measures of NR 333.07(4).

Hard copies of input and output data of analyses used to develop an EAP may be enough to determine its adequacy. However, before final approval is issued for the EAP, a copy of the electronic deck must be submitted.

11. ENVIRONMENTAL ANALYSIS.

NR 150 establishes procedures for determining what degree of environmental review and public notification is given to a particular project. Details on the specific actions required are discussed in the following "Process" section.

12. FEDERAL ENERGY REGULATORY COMMISSION (FERC) PROJECTS.

NR 333.02(3) exempts dams licensed under 18 CFR Part 12 provided the dam meets requirements which are at least as restrictive as the requirements of NR 333. These dams are essentially large hydroelectric dams and reservoirs regulated by the FERC.

a. In order to show compliance with minimum standards, an owner must provide the department with the following:

1) An acceptable emergency action plan (EAP)

2) An acceptable plan of operation and maintenance

3) Routine copies of their consultant's inspection report.

4) Evidence that the dam has sufficient hydraulic capacity for its classification and evidence that appropriate land use controls are in effect for a lesser capacity.

b. In most cases it will not be difficult for an owner to demonstrate the dam meets the minimum requirements. However, there are a few items which we should advise owners of in order to avoid inadequate EAPs and stability analyses. They are as follows:

1) FERC projects require EAPs. Unfortunately these EAPs may not require consideration of the requirements found within NR 333. In most cases FERC EAPs will be more restrictive than NR 333's required EAPs. However, it is possible to satisfy FERC EAP requirements without meeting the requirements of NR 333. In order to avoid this situation we should apprise dam owners of the requirements of NR 333 during the preliminary permit process and during review of EAPs.
2) FERC safety inspections require stability analyses during the independent consultant's five year inspection. These analyses generally consider a normal pool condition. We should advise the owner that they should also include a design pool analysis as required by NR 333.

Complete compliance with NR 333 should be requested at the time of relicensing of FERC projects. Since relicensing is the only other major opportunity the Department has to comment on FERC projects besides initial license or exemption applications, complete compliance with NR 333 should be addressed at that time. In order to determine if a FERC project complies with the requirements of NR 333, the information identified under NR 333.05 and .07(4) should be reviewed.

During the first stage consultation process (initial department contact), we should advise applicants that they should include evidence at the end of the stage two consultation (draft application submittal) which demonstrates that they have complied with the substantive requirements of NR 333 and include a provision within the draft application which specifies that the department will receive a copy of all inspection reports.

During the third stage consultation period (final application) we should verify that NR 333 has been complied with or that the applicant has adequately justified their reasons for non-compliance.

Chapter 30 is applicable to all structures and water related projects not affiliated with the structural components of the dam. Our comments at the third stage should request that the license issued by the FERC recognizes the Department's continuing jurisdiction under this chapter.

Chapter 31 essentially defines the Department's regulatory authority on all dams. FERC regulations supersede the requirements of Chapter 31 but we should try to retain as much of our regulatory authority as possible by requesting that FERC recognize our concurrent jurisdiction/interest within the license. We should take a more aggressive stand in those projects where an exemption from FERC regulations is being pursued. If an exemption is being sought we should inform them that all procedural and substantive portions of Chapter 31 remain in full effect.

If not related to an initial license or exemption application or a relicensing action, review of an EAP for FERC projects will not require full compliance with the other requirements of NR 333. The EAP review letter should, however, inform the owner that the Department will request full compliance of all NR 333 requirements at the time of relicensing.

If a determination is made that a FERC project does not meet the requirements of NR 333, the owner should be informed of the loss of exemption status and the reasons why.

c. The owner should also be informed that loss of exemption status will mean that additional information or action will be needed at such time one of the following actions occur:

1) The dam is proposed to be reconstructed.

2) The dam is ordered to be reconstructed.

3) A floodplain zoning ordinance adopted and approved pursuant to s. 87.30 becomes effective for the area downstream from the dam which is required to be regulated under NR 116.
13. **FINANCIAL CAPABILITY.**

Sections 31.14(2) & (3) require that applicants for permits to build new dams demonstrate a minimum level of financial capability to operate and maintain for a minimum of ten (10) years. Specific procedures have been developed considering ownership/operation arrangements, on how to determine the amount of financial responsibility and on acceptable ways of proving financial capability (see attachment #1). Section 31.14 also requires that the party to which a dam is being transferred demonstrate sufficient financial capability to maintain the dam and to cover the cost of future repairs.

14. **GRANTS.**

Section 31.385 and NR 335 establish procedures for implementation of a dam maintenance, repair, modification, or abandonment and removal aid program for dams owned by a municipality or public inland lake protection and rehabilitation district. State financial assistance is limited to no more than 50% of the project costs and a maximum of $200,000 per project.

15. **HYDRAULIC CAPACITY.**

For determining the adequacy of an existing dam's spillway capacity and the associated corrective action needed the following chart was developed on the same risk potential rationale of a new dam being overtopped during its design life as shown in Table III of NR 333 and is based on an assumed design life of 50 years for all dams. Corrective action should be taken at such time that the risk of overtopping before corrective action is taken exceeds the risk of overtopping of a new dam during its design life. The chart indicates when corrective action should be taken in the form of an immediate drawdown or issuance of orders to upgrade the spillway capacity.

This chart should only be used for dams that are structurally adequate and have not had a preliminary hazard rating determined. Dams that require reconstruction or have had a preliminary hazard rating determined must be upgraded to the required spillway capacity of NR 333 within 10 years unless ordered to do so earlier. Prior to an immediate drawdown appropriate parties (i.e., sheriff, local fish manager, etc.) should be consulted to minimize the potential impacts to the resource or downstream property owners.

While this chart provides a consistent basis for determining when a drawdown or repairs may be in order, it is not a substitute for professional judgment. If there are questions about the appropriateness of these guidelines in a given situation, an engineer should be consulted.

<table>
<thead>
<tr>
<th>Preliminary Hazard Rating</th>
<th>NR 333 Minimum Capacity</th>
<th>Existing Capacity</th>
<th>Corrective Action</th>
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</thead>
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<tr>
<td>1A</td>
<td>Q_{50}</td>
<td>&lt; Q_1</td>
<td>Immediate Drawdown</td>
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<td>Q_1-Q_2</td>
<td>Upgrade in 2 years</td>
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<td></td>
<td>Q_2-Q_3</td>
<td>Upgrade in 5 years</td>
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<td>Q_5-Q_{20}</td>
<td>Upgrade in 10 years</td>
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<td>&gt; Q_{10}</td>
<td>OK until next inspection</td>
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<td>Preliminary Hazard Rating</td>
<td>NR 333 Minimum Capacity</td>
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<td>Immediate Drawdown</td>
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<td>OK until next inspection</td>
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16. **INSPECTION OF DAMS.**

Section 31.19 requires the Department to inspect at least once every 10 years all large dams on navigable streams not inspected by a federal agency. Inspections may also be made if a complaint is received or by Department initiative. The Department may order repairs, alterations or additions or may order partial or total drawdown of the impoundment pursuant to this section if necessary to protect life, health or property.

17. **LAND OWNERSHIP.**

Section 31.05(3) requires the permit applicant to prove ownership of or an enforceable option to purchase the dam site and at least 65% of the land to be flowed or flowage rights on at least 65% of such land. Copies of deeds, purchase options and tax receipts are sufficient mechanisms to show rights to 65% of the flowage. For further discussion refer to "Easements" above.

18. **LEASES.**

Section 31.21 requires DNR approval for leases made or executed by a municipality "for the sale or lease of hydraulic or hydroelectric power" from a dam if the lease period exceeds 10 years and the dam was subject to a s. 31.06 or s. 31.08 permit. It should be noted that s. 31.21 is not enumerated under s. 31.33. Therefore, our approval of leases would not be required for those dams authorized by s. 31.33, the Mill Dam Acts or legislative grants, which are on streams that were considered nonnavigable at the time of authorization. Unless a dam was specifically authorized by s. 31.06 or 31.08 it probably will be
necessary to investigate the history of the stream to determine its usage. Streams that were known to be used for commercial navigation or log driving at the time of authorization should be considered navigable and subject to the lease approval process of s. 31.21. For further discussion of navigability refer to Chapter 30.

Our review of any such leases should verify that the following points are adequately addressed in the lease:

a. The lease should include a condition that the lessee abide by any previously or subsequently issued orders by the Department.

b. The lease should identify the parties responsible for operation, inspection and maintenance of the dam including appropriate roles of the parties concerned in implementing an emergency action plan.

c. The lease should include a condition that failure to adhere to the above conditions should be grounds for nullifying the lease.

19. MAP SCALE.

Section 31.12 requires applicants to submit maps with a scale of at least one inch per thousand feet.

20. OPERATION AND MAINTENANCE.

Section 31.18 requires dam owners to operate and maintain all dams, equipment and appurtenances in good repair and condition for the protection of public rights and for the preservation of life, health and property. Except in an emergency the owner may make no substantial alteration or addition to the dam without an authorizing order from the Department.

NR 333.07 requires an adequate operation, inspection and maintenance plan. Depending on the complexity of the dam, the operation plan may have a couple of simple paragraphs or require many pages. The operation plan has three purposes:

- To ensure that all outlet works are operational.
- To ensure that the outlet works are properly operated in a timely manner.
- To instruct operation personnel on appropriate procedures.

The operation plan should describe briefly and simply how the dam will be operated. The instructions should describe the function of the dam and list operational requirements to minimize flood hazards or comply with any other requirements such as minimum flow releases, minimum and maximum established pond levels, drawdown procedures, etc.

To evaluate and "fine tune" dam operation, it is important that the operation plan include a log of rainfall occurrences and amounts, pond levels, weather conditions, equipment operated and other general comments and observations. See Attachment #4 for a sample Operation Plan.

A regular inspection and maintenance program is necessary to protect the dam owner's investment and ensure that the dam fulfills its intended purpose. Maintenance is the work necessary to prevent deterioration and to protect components of a dam. A systematic and regularly scheduled and documented inspection program allows a dam owner to monitor the condition of the dam and plan the
maintenance program in advance.

Inspection plans should identify all components of the dam and physical conditions which, if neglected, could lead to failure of the dam. Embankments should be checked for seepage, slope stability, surface erosion, animal burrows, adequacy of ground cover and adequacy of other slope protection measures. Concrete components such as spillways, abutments, piers, downstream apron, etc., should be checked for spalling, cracking, slipped joints or other movements, erosion, etc. All sluice gates, tainter gates, stoplog gates, or other outlet works should be checked for deterioration, deformation, seal leakage, adequacy of lifting or operating mechanisms, etc. Other physical conditions such as downstream channel obstructions, material buildups, erosion or scour holes, etc., should be noted as appropriate.

Maintenance plans should identify routine work items to be done on a regular basis and identify and schedule other work items noted through the inspection program. Among the items to be included in a routine maintenance plan would be removal of trees and brush from dam embankments, periodic mowing or cutting of dam embankment vegetation, filling of animal burrows and animal control, checking for debris or obstructions in spillway channels and outlet works, seeding or riprapping embankment areas damaged by erosion, painting, servicing mechanical equipment, keeping access roads clear and usable, etc.

Inspection and maintenance plans should specifically state the following:

a. Who is responsible for routine inspections and how often the structure will be inspected.

b. The source of maintenance funds e.g., does the replacement money for a tainter gate come from readily available funds or must it be allocated from a governmental body?

c. Who is responsible for maintenance of the dam and who must they notify in the event of a significant repair.

See Attachment #5 for a sample Inspection/Maintenance Plan.

21. PROFESSIONAL ENGINEER.

The Department requires that plans for construction or major alterations of dams be prepared by a Wisconsin registered professional engineer pursuant to NR 333.05 to ensure protection of public rights and to promote safety and to protect life, health and property. The department may require that plans be submitted by a professional engineer where necessary to protect public welfare.

22. PUBLIC INTEREST.

Under ss. 31.06 and 31.08 the public interest must be protected in granting permits for dams. Sections 31.06 and 31.08 identify several components of the public interests and specify how they should be protected. Comparisons must be made between existing ecological, aesthetic, and recreational values at a proposed dam site and the ecological, aesthetic, economic and recreational values resulting from dam construction.

23. PUBLIC RIGHTS.

Section 31.06 requires the department to compare the public rights of recreational use, enjoyment of natural scenic beauty and environmental quality of the river in its natural state to those of the flowage. Sections 31.18 and 31.185 provide that any permit for transfer, alteration or abandonment must have
provisions to protect life, health and property, promote safety, and preserve public rights in navigable waters.

24. RAISE AND ENLARGE.

Section 31.13 requires that many of the considerations which are required for new dams be given to raise and enlarge a dam. These considerations include obstruction to navigation and protection of life, health, property and public rights.

25. REPAIR OR RECONSTRUCTION.

NR 333.03(23) defines reconstruction as "alteration of an existing dam in a manner which affects its hydraulic capacity or structural integrity." Reconstruction is interpreted as meaning a significant change or modification (alteration) of a dam from its original configuration. With this understanding it is clear that the dam's structural stability or hydraulic capacity will also change and that the dam must meet NR 333 requirements within 10 years of a preliminary dam hazard rating for a dam that is to be reconstructed, unless we order earlier compliance under Ch. 31.

There are situations (where reconstruction is not being proposed) when upgrading a dam for compliance with NR 333 should be considered.

Whenever a dam is in such poor condition that it is a threat to life, health and property and failure is imminent we should order an immediate reservoir drawdown to remove the impending threat. Depending on the severity of the situation, we can order either immediate compliance with NR 333 or start the "10-year time clock" for upgrading by making a preliminary hazard rating. Note that the department can order "reconstruction" under NR 333.04(1)(b)3 or major repair under s. 31.19(5). In order to be parallel with ch. 31, NR 333.04(l)(b)3 should be interpreted to read "Unsafe existing dams which are ordered to be reconstructed or repaired".

In cases where a dam needs major repairs, but failure is not imminent, we should make a preliminary hazard rating prior to approving repair. This action will require the dam owner to bring his dam into compliance with NR 333 within 10 years. Knowing that he needs to upgrade the dam an owner may be able to at least partially upgrade his dam with minimal extra cost during the repair process.

In cases where a dam needs major repairs but does not endanger life, health or property, we may consider approving the repair plans without requiring compliance with NR 333. It is an owner's decision as to how quickly they comply with NR 333 standards.

A matrix of various dam maintenance, repair or reconstruction activities is provided as a quick reference at the end of this chapter as "Attachment 2" to categorize the activity and determine whether or not NR 333 compliance is required.

26. STABILITY ANALYSIS.

NR 333 requires a stability analysis of a dam. The documentation of structural stability should include the following:

a. Structural stability calculations for all concrete structures. These calculations should include the following loading conditions.

1) Normal reservoir levels (base flow) and silt loading.
2) Normal reservoir levels, silt loading and ice loading.
3) Maximum pool levels (design flood) and silt loading.

*Design of Small Dams* by the United States Department of the Interior includes an excellent discussion of the techniques that should be used to determine the stability of concrete structures (see "Concrete Gravity Dams," pages 329 through 342 of the second edition). This analysis is based upon a foundation pressure approach rather than solely a summation of moments analysis. The foundation pressure approach is superior to the overturning analysis since it assures that the appropriate static uplift pressure will be used.

If the foundation material is rock, a shear friction factor (SFF) approach should be used to determine resistance to sliding. If the foundation is a non-cohesive material, a sliding factor of safety (FS) approach should be used.

**Allowable shear friction factors**

1) High hazard dams for normal loading conditions SFF $> 4.0$
   
   High hazard dams for maximum pool or ice loading conditions SFF $> 2.0$

2) Low or significant hazard dams for normal loading conditions SFF $> 2.0$
   
   Low or significant hazard dams for maximum pool or ice loading conditions SFF $> 1.25$

**Allowable friction factors**

1) All dams on noncohesive foundations, for normal loading conditions FS $> 2.0$

2) All dams on noncohesive foundations for maximum loading conditions FS $> 1.25$

b. Earthen dike stability calculations based upon estimated and known soil parameters. Loading conditions for these calculations should include normal (base flow) and design (design flow) pool reservoir elevations. Minimum acceptable earthen embankment slopes are 3H:1V for upstream slopes and 2.5H:1V for downstream slopes. These slopes are considered to be the minimum acceptable slopes for stability purposes, unless a stability analysis proves otherwise. Flatter slopes of up to 4H:1V may be required to allow adequate maintenance to be performed.

   The documentation of stability should be based upon actual calculations. The seal of a state or local agency or a professional engineer is required but not considered adequate, by itself, as documentation of structural stability.

**27. SUBMERGENCE.**

Section NR 333.07(3) allows for reduced hydraulic capacity if the structure is submerged by flows less than the minimum hydraulic capacity specified in NR 333.07. Submerged is defined to mean that the difference between the water surface elevations upstream and downstream from a dam is one foot or less. Submissions for these types of structures should include the following:

a. Calculations which demonstrate that the dam can safely pass the flow up to the point of submergence.

b. Stability analyses of the dam which consider sliding, overturning and foundation failure during base flow and flows up to submergence.
c. The estimated cost of the project as stated in NR 333.05(3)

d. An adequate operation, inspection and maintenance plan.

e. An adequate EAP. The EAP for a dam which becomes submerged should be based upon failure during base flow conditions.

28. TIMBER REMOVAL FROM FLOWAGES.

Under s. 31.18(4) the department may require applicants for dam permits to remove from the flowage prior to flooding all or any portion of the standing and fallen trees and all or any portion of the brush. The plan, which requires approval by the Department, should include the nature, extent and time for removal.

29. TRANSFER OF OWNERSHIP.

Section 31.185 requires a permit for the transfer of dams authorized under s. 31.06 or 31.08 and any other dam over which we have subsequently obtained jurisdiction.

Section 31.21 deals with transfer of any permit granted under ss. 31.06 and 31.08. It requires that the Department investigate and make a finding that:

a. The transfer does not create a condition prohibited by s. 196.665.

b. The transfer complies with s. 31.14(2) or (4).

Section 31.21 also prohibits transfers of permits granted to municipalities to private individuals and ownership of dams by foreign corporations.

Dams authorized by s. 31.33, the Mill Dam Acts and legislative grants, which are on streams that were considered nonnavigable at the time of authorization, do not require a permit from the Department unless the Department has obtained jurisdiction by some earlier action, (e.g. reconstruction, enlargement permit, etc.) It probably will be necessary to investigate the history of the stream to determine its usage. Streams that were known to be used for commercial navigation or log driving at the time of authorization should be considered navigable and subject to the transfer procedures of s. 31.185.

Although some dams do not require a specific permit to transfer ownership, all dam transfers (except cranberry dams) must comply with s. 710.11. Section 710.11 requires that a person may not accept the transfer of the ownership of land on which a dam is physically located unless the person complies with s. 31.14(4).

The phrase "the specific piece of land on which the dam is physically located" should include an area of sufficient size to allow the owner to work on the dam and to allow for access to the dam. Transfer of other portions of a parcel of land not reasonably and physically necessary to allow the owner of the dam to operate, maintain and repair the dam and its appurtenances, including the area necessary for ingress and egress could occur without receiving Department approval. However, any transfer which is made by the owner of the dam in the vicinity of the dam should be brought to the Department's attention so we can determine the land area necessary to service and operate the dam and advise the landowner of the same.

The creation of s. 710.11 was intended to ensure that people working in the real estate profession,
including brokers, attorneys and mortgage insurance companies, will be aware of the requirements of s. 31.14(4) and 31.185(1) & (2). This awareness should enable the Department to maintain accurate records regarding dam ownership and to improve the administration of its dam safety program.

For dam transfers under a land contract it is necessary to review the project for financial responsibility compliance at the initiation of the land contract. It is better to advise the land contract purchaser of the potential requirements for a bond, letter of credit, or other form of surety, and the amount of that surety, at the outset of the land contract. If we do not complete these steps at this time, we can end up with a situation where the land contract purchaser puts out a substantial amount of money and at the end of the land contract period determines, because of financial responsibility requirements, the purchaser cannot take over the property involved.

Therefore, under a land contract purchase, the individual who is purchasing the dam should be formally advised as part of the land contract that he or she will have to meet the financial responsibility requirements of s. 31.14. We should determine at the outset what the amount involved is and that should be made known to the land contract purchaser as part of the land contract. It will not be necessary for a bond or other form of financial surety to be provided at the inception of the land contract, but rather that the submission of the financial surety should occur at the time that the transfer of the deed occurs.

30. UNAUTHORIZED DAMS.

If an investigation identifies unauthorized dams that have a negative water quality and fish habitat effect, and the department concludes they should be removed, the following procedure should be used:
   a. Initial steps:
      1) Attempt to determine ownership
      2) Research the original authorization or lack thereof
      3) Seek voluntary removal or modification of structure.
   b. If step a. doesn't work then we can follow procedures identified under s. 31.253. These procedures involve conducting a public informational hearing or publishing a Class 2 notice stating we will seek or cause removal of the dam without a public informational hearing if one is not requested within 30 days. Upon completion of the public informational hearing or 30 day notice period as the case may be, an order may be issued for removal of the dam. Such order should include appeal rights and if so appealed may result in the need for a contested case hearing pursuant to s. 227.42. If the owner does not comply with the removal order, citations may be issued and the matter further pursued through the local District Attorney's office. If cooperation and compliance cannot be obtained through the District Attorney's office, it may be necessary to refer the matter to the Attorney General's office for enforcement under s. 30.03.
   c. If we can't find an owner, we can use s. 31.187 for removal of abandoned dams.
   d. If we feel a dam meets applicable requirements, it can be authorized.

31. VIOLATIONS.

Section 31.25 declares that dams constructed or maintained in violation of Chapter 31 or not equipped as required, are public nuisances and may be abated at suit of the State or any citizen. Section 31.23(2) provides for a forfeiture of not more than $1,000 for violating any of the provisions other than those mentioned in s. 31.23(1) or orders made by the Department pursuant to Chapter 31.
32. **WATER QUALITY STANDARDS.**

Section 144.27 provides: "144.27 Limitation. Nothing in this subchapter affects ss. 196.01 to 196.79 or Ch. 31" Therefore, NR 102 (Water Quality Standards) and Chapter 144 (the statutory authority for NR 102) are not applicable to approval or denial of dams. However the Department has the power and authority under s. 31.12(2) as provided by s. 31.33(1) to approve (or deny) dam plans if the dam meets (or doesn't) the standards of s. 31.02(2) and 31.12(2) to conserve and protect life, health, property and the public rights in the stream. Public rights include water quality and the protection of water quality (nondegradation).

NR 102 establishes water quality standards for surface waters of the state and describes the designated use categories for such waters and the water quality criteria necessary to support these uses. Water quality standards should protect the public interest, which includes the protection of public health and welfare and the present and prospective uses of all waters of the state for public and private water supplies, propagation of fish and other aquatic life and wild and domestic animals, domestic and recreational purposes, and agricultural, commercial, industrial, and other legitimate uses.

33. **WETLANDS.**

NR 1.95 states the DNR Board policy which requires the DNR to consider the need for protecting wetlands in the decisions made by the Department.

NR 103 establishes water quality standards and implementation procedures to be applied by the Department in making decisions affecting wetlands. The Department presumes that wetlands are not to be adversely impacted or destroyed. NR 103 further specifies the balancing test to be used by the Department when determining whether or not to issue a permit that involves wetlands. For further discussion on wetlands refer to Chapter 180.

34. **ZONING.**

Dam development, maintenance and repair are not exempt from county zoning regulations. Section 144.27 states that "Nothing in this subchapter affects ss. 196.01 to 196.79 or Chapter 31." Thus, if local zoning regulations adopted under s. 144.26 (such as shoreland provisions) conflict with dam safety requirements under Ch. 31, the conflict must be resolved in favor of the public safety concerns of Chapter 31 for maintenance or repair of dams.

The general rule of law is that all relevant statutes must be applied to a fact situation and where there is a conflict between statutes, the more specific law governs. Here zoning statutes require local governments to administer shoreland and other zoning regulations (ss. 59.971, 61.351, 62.231, etc.). These "environmental" statutes must be read together with the public safety provisions of Ch. 31 related to dams so that both requirements of law are applied where they are not in conflict.

Where regulations are incompatible, s. 144.27 directs that the Ch. 31 provisions will supersede. For example, a DNR repair order or required maintenance under Ch. 31 may compel removal of trees and shrubbery from a dike to maintain its stability. Local shoreland zoning restrictions on clear cutting adjacent to waterways which would ordinarily prohibit such removal would be overridden by the Ch. 31 concerns. Another example may be an ordered emergency or permanent draw down of an impoundment which results in the drainage of upstream wetlands without benefit of wetland rezoning under local ordinances.

Shoreland permits may be required by a county to assure that dam repair activities are accomplished in a
manner that controls erosion and protects other environmental interests provided such permits are issued in a timely manner which allows compliance with any deadlines included in a Ch. 31 order. As a practical matter this will provide an opportunity for local governments to address additional zoning concerns which do not contradict the substance or urgency of Ch. 31 dam maintenance and repair concerns. Compliance deadlines in Department orders should allow sufficient time for owners to acquire any necessary local zoning permits unless such a delay would compromise the objectives of the Ch. 31 order. The order should specifically state that: 1) local governments may impose additional conditions on the repair activity which are not inconsistent with the Ch. 31 order, and 2) failure to obtain local authorization does not relieve the owner of the duty to comply with a Ch. 31 order.

In some instances emergency orders for dam repair or draw down will require immediate action to avert imminent dam failure without the benefit of local zoning permits. In other cases Department staff should coordinate ordinary dam maintenance with local zoning concerns and include advice to dam owners in Ch. 31 orders that local authority may be required for some dam related activities. The advice should include the name, address and phone of the local zoning office and a copy of any correspondence should be forwarded to that office.

[Process Matrix grid appears here]

E. PROCESS

1. ABANDONMENT.

a. Application - Often, dam owners are reluctant or unable to spend the amount of money necessary to repair or maintain the dam. The dam owner is not obligated to maintain the dam forever. The owner is ready to abandon the dam or to transfer ownership to anyone. Commonly, no one wants to acquire the dam but there is much vocal opposition to abandonment. We usually recommend that the owner apply to abandon the dam. A public hearing may help to find a financially capable entity to accept transfer of the dam.

In addition to the information in the "Permit to Abandon A Dam" (Form 3500-30), an application must also specify:

1) Proof of ownership of the dam.
2) The drawdown procedure to be used prior to dismantling of the dam.
3) The parts of the dam that will be removed to render it abandoned.
4) The method by which the dam will be removed.
5) The disposal site for dam materials.
6) Stream channel and flowage bed restoration and protection needs.
7) Also see D.1.

Removal of a dam would modify flood profiles both upstream and downstream. Any existing floodplain ordinance should be modified to reflect the changes.

b. Field Investigations - The investigation should consider:

1) Whether the removal plan is adequate based on the site and structural features of the dam.
2) Potential safety problems with remaining portions of the dam.
3) Impoundment bank features which might indicate potential erosive conditions caused by the
proposed drawdown.
4) Sediment contamination and erosive conditions to determine adequacy of proposed restoration measures.
5) Impact on riparian property, existing uses and fish/aquatic life.
6) Future public uses (navigation and incidents thereof).
7) Time limit for completion of the abandonment.
8) Also see D.1.

c. **Environmental Analysis** - NR 150 identifies the abandonment of a large dam as a Type II action which requires that an Environmental Analysis be prepared; however, abandonment of small dams is a Type III action.

d. **Notice and Hearing Requirements** - Sections 31.18 and 31.19 can be used to issue an order without a hearing; however, s. 31.185 requires a public notice and hearing (if requested).

e. **Final Disposition** - Permits should be conditioned to ensure protection of public interests and may require:

1) Removal of specified portions of the dam.
2) Safe and appropriate dam dismantling methods.
3) Proper disposal of removed materials.
4) Restoration of the site to a stable condition.
5) Measures needed to retard erosion of sediment from the new channel and exposed lakebed (above the dam) as well as techniques to trap sediment from flowing downstream. Refer to erosion control specifications under "Abandonment" in the Standards section.
6) Approval of a final engineering plan for approval.
7) Also see D.1.

2. **ALTERATIONS, RAISE AND ENLARGE.**

a. **Application** - Because of the technical nature of most dam alteration proposals, the Bureau should be appraised of such proposals immediately. Large dams may need to comply with NR 333 standards. The application to alter a dam must generally specify:

1) Property description and proof of ownership.
2) Plans for proposed alterations.
3) Documentation of financial capability to complete the project.
4) See D.15.

b. **Investigation** - The investigation should consider:

1) Potential safety problems.
2) Other repairs.
3) If operational levels as well as maximum and/or minimum releases are adequate.

c. **Environmental Analysis** - Alterations to large dams in navigable waters that may affect the level of the flowage or release of water downstream are Type II actions which require an Environmental Analysis. Raising and enlarging dams in either navigable or nonnavigable waters are Type III actions. All other alterations are Type IV actions.

d. **Notice and Hearing Requirements** - Section 31.18 can be used to issue an order without a
Section 31.185 involves a permit process which requires public notice and a hearing (if necessary) prior to issuance.

e. Final Disposition - Permits or orders should require that:

1) The permit is not in effect until plans have been approved.
2) The dam owner is financially capable.
3) Adequate operating procedures, levels and flows, are established or reaffirmed.
4) The necessary easements or legal arrangements are obtained prior to construction from all property owners affected by the increase in the regional flood elevation.

3. CONSTRUCTION.


Proposed dam projects also generally call for an early consideration of engineering aspects of the proposed project. Timely contact with the program engineer in the Water Regulation Section should be made.

An application to construct on a navigable stream should use form 3500-10, "Permit to Construct A Dam". An application to construct a dam on a nonnavigable waterway requires plan approval, and should include information on Form 3500-53 and the information detailed on attachment #6 (Dam Plan Approval Information Requirements).

Dam plans required for initial review and notice of hearing may be rather general in nature. They should include sufficient detail and be referenced to a retrievable benchmark, preferably in MSL datum, and indicate the following:

1) Important Operational Features
   Features of the dam including embankments, foundation preparation, and spillways should be shown on the initial plans. Spillway detail should include types of gates, preliminary sizing of gate openings, closure devices for gates, and elevation of gate sills and open spillway crests. The watershed drainage area and other hydrologic features should be provided along with calculations done to size the dam spillways. Final plans for large dams will need to comply with the standards contained in NR 333.

2) Operating Levels
   Operating levels for the proposed impoundments should be included in the information received for the proposed dam. The levels might include a maximum which would be in effect year round and one or more minimum levels. It may be desirable to have a minimum level that would apply during the open water boating season from approximately May 1st through November 1st and a winter drawdown level that would operate during the remainder of the year in the interests of minimizing ice damage to shorelines and to provide a storage cushion for spring runoff. These operating levels may very well be changed during the discussion of the project prior to the regulatory decision but should be indicated in a preliminary way for the sake of discussion during the investigation of the project. See handbook Chapter 130 (Water Levels and Flow) for additional information.

3) Impoundment Characteristics and Preparation
   The application should include the following information about the proposed impoundment:
a) A topographic map at a scale of not less than 1 inch = 1,000 feet depicting the flowage.
b) Acreage and volume at normal and maximum pools.
c) Plans for clearing and grubbing.
d) Other proposed work such as beach developments, shoreline protection, fish and wildlife habitat.

It is important to note that impoundment preparation work completed prior to filling is considered part of the project authorized under the permit for the dam. Impoundment modifications after the impoundment is filled will require additional approvals.

4) Land Ownership
Land ownership information for the project area must be given to the Department for use in mailing notice of the project proposal and hearing notices if required. This land ownership information is also important in determining compliance with ss. 31.05(3) or 31.14(3).

5) Financial Responsibility
Financial responsibility is critical to long-term operation and safety. Consideration of this requirement should begin early in the approval process. The detailed procedure is found in attachment #1.

b. Field Investigation

1) Dam Site
The dam site investigation should consider geology, soils, topography and vegetation. The latter often indicates groundwater emergence which would require special consideration in the dam design. Take special care in investigations in the Driftless Area of southwestern Wisconsin because several failures occurred in the abutments of dams during floods in the summer of 1978.

2) Impoundment
Investigation of the proposed impoundment area should consider the proposed operating levels as they relate to the shoreline configuration. Soil types in the shoreline area should be considered to anticipate erosion potential of the shoreline.

Shoreline area use should be discussed to determine what enhancement activities should be considered as a part of the permit for the dam. Swimming beaches, marina facilities such as wharves or breakwaters, and erosion control measures are all candidates for shoreline preparation activities.

Impoundment bottom enhancement activities should also be considered. Fish management devices such as fish cribs or artificial rock shoals for fish spawning can be considered. The flowage should be examined to determine what timber and brush should be cut to improve fish and wildlife habitat. The construction or preservation of wetland areas at the entrance of the stream into the proposed impoundment area should be considered as a sediment trap as well as a conservation area. The uppermost portions of the impoundment are seldom suitable for intensive recreational use but are often suitable for many fish and wildlife activities.

Impoundment bottom soil types should be evaluated carefully to detect any soil types which would have the potential to become floating bogs. Peat soil under a well-rooted cattail stand or under cedar swamp vegetation are examples of soil type/vegetation complexes which tend to
3) Streams

Investigate the stream within the project reach, keeping s. 31.06 standards in mind. Both recreational and scenic beauty values, as they naturally exist and as they would exist if the impoundment were built, should be considered.

4) Watershed Hydrology and Stream Hydraulics

Watershed hydrologic analysis and stream flow hydraulic analysis will be reviewed or made by engineers in the Water Regulation Section. Investigators performing the field investigation should check the information provided by the applicant to be assured that adequate information is available for these analyses.

5) Project Sites

Information provided by the applicant should be confirmed and additional information developed as needed for the appropriate level of environmental review to be performed. In many instances, additional information will be required from the applicant.

c. Environmental Analysis - Constructing large dams in navigable or nonnavigable waters is a Type II action requiring an Environmental Assessment. All other dam construction activities are Type III actions requiring public notification through a news release.

d. Notice and Hearing Requirements - For dams on navigable streams, the Department issues a public notice pursuant to s. 31.06. Special interest groups, including environmental and sportsmen's groups, property owners associations and others, should be notified. No hearing is held unless one is requested by the public or the Department. Notice and hearing are not required for dams on non-navigable streams but an informational hearing may be held if appropriate.

e. Final Disposition - Components of a permit and order for a dam permit include the heading, the FINDINGS OF FACT, the CONCLUSION OF LAW, the ORDER, and APPEAL RIGHTS. It is important to note that the plan approval for the dam usually follows but may accompany the issuance of the permit.

Findings of fact include procedural jurisdictional requirements, ecological facts about the existing condition of the proposed project site and of the project site in a completed condition. Economic factors appropriate to the decision should be presented.

A finding is required on the aesthetic impact of the project. This will truly be a judgement call either by the staff person drafting the order if no hearing has been held, or by the hearing examiner in the case where a hearing has been conducted. The required comparison of recreational values must also be included as a finding of fact.

Technical findings of fact include a benchmark description and elevation (mean seal level) for reference in further proceedings following the permit issuance. A general description of features of the dam should be included as a finding of fact. Proposed water levels (maximum, minimum, and normal) and their impact on fish and wildlife values should be included. A finding of fact regarding the environmental impact of the proposed project must be included.

Conclusions of law must indicate our authority under Chapter 31, Section 1.11, and NR 150.

The order must include a granting of the authority or denial as appropriate along with conditions...
requiring plan approval of the dam and preparation of the flowage bed prior to construction of the
dam if authority is granted. Impoundment levels should be established in the order. Water
discharges through the dam to insure adequate downstream flows should also be detailed. We
usually establish a maximum and at least one minimum with perhaps a seasonal drawdown if
appropriate. Conditions for the clearing and grubbing of the impoundment as well as other special
conditions should be included in the order.

See sample permit in Handbook Ch. 200.

f. **Monitoring** - It is important to assure that no construction on the dam begins until plans have been
approved. Impoundment preparations must be completed prior to filling the impoundment. Closure
of the dam for filling must include maintenance of sufficient downstream flow as required in s.
31.34, to protect public rights. Special caution is necessary at the first filling of the impoundment
when debris coming out of the impoundment might clog the discharge works at the dam.

For large dams, there should be site inspections during construction.

After completion of the project, timely inspection of the dam should be performed to make sure that
water levels are being maintained at their prescribed levels and that proper maintenance of the dam
is being performed.

The Water Regulation Section will establish a field file for new dams on navigable streams. Field
files will be maintained at Madison and the appropriate district office.

4. **INSUFFICIENCY.**

Measures may be undertaken to ensure the structural integrity of a dam upon the owners initiative or
Department initiative, or complaint. The program engineers should be notified early in the process.

a. **Environmental Analysis** - Approval of temporary drawdowns for safety inspections if below an
ordered minimum level are Type III. Drawdowns to relieve unsafe or dangerous conditions are
Type IV actions.

b. **Notice Requirements** - Sections 31.18 and 31.19, are often used to order immediate improvements
in hazardous situations. No notice is required. A potential safety hazard for public recreation near
an existing dam due to proposed alterations may justify public notice and hearing provisions under
s. 31.185.

c. **Field Investigation** - A dam safety inspection is required. The inspector must document the
findings on a Dam Inspection Report (Form 3500-74). The original should be put in the dam file.
The inspector should contact the owner, provide him with a copy of the inspection report and see
that necessary repairs are made.

d. **Final Disposition** - Inspectors may determine that the dam is not in need of immediate repair or
may order repairs and determine the degree of urgency in making those repairs.

During routine work assignments in the vicinity of dams, a casual check in passing is useful in turning up safety problems.

After a permit or order has been issued for alteration or repair of a dam, it should be inspected to ensure compliance.

Occasionally problems will develop that may threaten the immediate safety of the structure. In such cases, the downstream area should be assessed to determine probable dangers resulting from the anticipated failure. If human life is threatened, we should take emergency action to draw down the impoundment and begin evacuating the downstream area. If property damage may be substantial we may also want to take similar action. In most cases, the sheriff's office is an appropriate contact to aid in an evacuation attempt.

If any emergency threatens the dam, we should order the owner to draw down the impoundment and/or effect immediate repairs. If the dam's spillway is impaired so that a drawdown cannot be facilitated the structure should be breached. The owner may make alterations to the structure if an emergency exists without obtaining authority from the Department. Where possible, the engineers should coordinate with area managers.

The program engineer should be involved in any decision to order an emergency drawdown.

5. **OPERATE AND MAINTAIN.**

a. **Application** - A permit is required for persons interested in operating and maintaining a dam which was constructed in navigable waters without legislative permission prior to July 10, 1915.

In addition to the information in form 3500-53 an application must also specify:

1) Specific description of the dam site.
2) The year in which dam construction was completed.
3) Detailed description of the dam and equipment.
4) The past, present and future purpose/use of the dam.
5) Location of nearest city/village and dam both above and below the dam site.
6) Documentation of financial responsibility.

b. **Field Investigation**

1) An program engineer should be involved in the field inspection to determine needed repairs and dam safety considerations.
2) Establish time limit for completion of repairs.
3) A determination of whether operational levels and flow releases are adequate.

c. **Environmental Analysis** - A specific type action is not listed for dam operation and maintenance.

d. **Notice and Hearing Requirements** - The Department issues a public notice pursuant to s. 31.06. No hearing is required unless one is requested by the public or Department.

e. **Final Disposition** - Permits should be conditioned to insure the protection of public rights as well as life, health and property and should address:

1) All necessary repair work.
2) The owner is financially capable of maintaining the dam for a minimum of 10 years.
3) Adequate operating procedures, levels and flows, are established or reaffirmed.
4) Boating safety and portage considerations are addressed.
6. **TRANSFER.**
   
   a. **Application** - In addition to the information in the "Dam Ownership Transfer" (Form 3500-13) an application must generally specify:
      
      1) Property description and proof of ownership including ownership of flowage rights. For further information on land contract arrangements, refer to "Transfer of Ownership" in the Standards section.
      2) Party(ies) responsible for safety and repair.
      3) Documentation of financial capability. The detailed procedure is found in attachment #1.
      4) Method of land transaction.
      5) Owner access to the dam for operation, maintenance, and repair.
      6) Dam initially authorized under s.31.06 or 31.08 must include the provisions of s. 31.21.

   b. **Investigation**
      
      1) The Bureau should be involved in the field inspection to determine needed repairs and dam safety considerations.
      2) Time limit for completion of repairs.
      3) A determination of whether operational levels and flow releases are adequate.

   c. **Environmental Analysis** - The transfer of ownership associated with all dams is a Type IV action.

   d. **Notice and Hearing** - The provisions of s. 31.06 are applicable except for transfers involving milldams. For detail see the "Transfer of Ownership" in the Standards section.

   e. **Final Disposition** - Permits should be conditioned to ensure the protection of public interests specifically requiring that:
      
      1) Responsibility for all repair work is assigned.
      2) The new owner is financially capable of maintaining the dam for a minimum of 10 years.
      3) Adequate operating procedures, levels and flows, are established or reaffirmed.
      4) Flowage easements are transferred where appropriate.
      5) The owner maintains adequate access to the dam site.
ESTABLISHING FINANCIAL RESPONSIBILITY

A. Types of Owners

Past experience has revealed the advantages and disadvantages of the various classes of dam owners.

1. Federal agencies - A major concern with federal ownership is whether or not the Department will have sufficient control over operation and maintenance of the dam. Federal takeover may substantially hinder the state in fulfilling its trust responsibilities.

2. State/local government - Experience with state/local governments has been mixed. Often state and local units of government don't have the money or personnel to effectively operate a dam. The ability of these governments to finance dam operation and maintenance through taxes is unlikely to improve in the future, especially considering levy limits and the general feelings of taxpayers.

3. Private ownership - Some types of private owners, especially the larger public utilities, have demonstrated responsibility.

4. Foreign ownership - Sections 31.21 and 196.53 prohibit a foreign corporation from holding a dam permit or franchise to operate a dam.

B. Ownership/Operation Arrangements

1. Split ownership - We discourage split ownership because it makes enforcement extremely difficult. Either owner can disclaim responsibility for violation of operating requirements. It is extremely difficult to coordinate repairs. Split ownership, in our judgement, does not assure proper operation or maintenance.

2. Separate owner and operator - A separate owner and operator is an acceptable arrangement. The owner is responsible for damages, due to improper operation of the dam.

3. Multiple operators - Multiple operators make it difficult to fix responsibility for improper actions. There are only a few examples of this situation. Any new ones should be discouraged.

C. Establishing Financial Responsibility

The basis for establishing a dollar figure for financial responsibility is the cost to put the dam in good condition, plus the annual maintenance cost (times an inflation factor) plus the cost of damage in the 100-year flood (times an inflation factor), times the probability of the 100-year flood occurring in the 10-year period. We ordinarily use the 100-year flood and a 10-year period, although the method can be applied to any flood frequency or time period. The previous years CPI inflation rate should be used unless otherwise justified.
Financial responsibility = Annual maintenance X Inflation Factor 1
in dollars x Cost

+ Cost of
Damage in 100-yr. flood X Probability of Flood Occurrence X Inflation factor 2

+ Up Front Repair Cost*

* Not added in if present owner agrees to make the repairs prior to effective date of transfer. This figure would be zero for a new dam.

1. Estimation of Annual Maintenance and Damage Costs

The difficult parts of arriving at a dollar figure for financial responsibility is the estimation of annual maintenance cost, the cost to repair expected damage to the dam caused by the 100-year (or other frequency) flood and the cost of initial or up-front repairs. Damage to downstream properties is not considered a damage cost in the analysis.

We should provide an applicant and transferee with our best approximation of the costs so they can decide if the chances of approval are good enough to justify further investment to obtain an accurate number.

Annual operation and maintenance can be composed of a variety of items. But the following items should be considered.

1) Semi-annual mowing of all dikes
2) Operation, repair and/or replacement of all gates
3) Liability Insurance
4) Concrete repair
5) Burrow hole repair
6) Ice removal
7) Painting
8) Riprap/erosion control
9) Vandalism repair
10) Flashboard or stoplog repair or replacement
11) Monitoring

Estimates of labor costs can be obtained from the quarterly Dodge reports or a current engineering news record. Labor costs should not be reduced due to volunteer labor. Cost of common materials should be obtained from local retail distributors. Cost of concrete should include the cost of dowels, drilling, reinforcing steel, forming and concrete. Cost of heavy equipment can also be obtained from the Dodge reports.

2. The Time Factor

Number of years to consider: the minimum number of years to consider is statutorily 10 but we are clearly able to consider more years based upon the preservation of public rights and public/private developments on the body of water involved. Questions which we need to address are:
Does the dam contribute to public activities/rights which are dependent on existence of the dam? Such as:

a) Fishing  
b) Boating  
c) Swimming  
d) Trapping  
e) Ice Skating/Ice Boating  
f) Aesthetics  
g) Flood control  
h) Flow augmentation  

What is the degree of enhancement to the public's usage/rights as a result of placement of the dam? Is it moderate, significant or great?

What kind of private/public developments are there which are dependent on existence of the dam? Such as:

a) Housing  
b) Camping  
c) Parks  
d) Marinas  
e) Swimming  
f) Water supply  

The number of years to consider will be a composite of all of these factors. For an impoundment which minimally impacts the above items the number of years to consider should be 10. For a impoundment such as Lake Delton which could severely impact the economics of the entire area, we should consider a 50 year period.

3. Flood Damage

We will consider no structural damage up to the design flood and then consider the possibility of the design flood being exceeded during the mandatory maintenance period. For example: The standard risk equation is:

\[ R = 1 - (1 - 1/T)^n \]

where:  
- \( R \) = Risk of occurrence in the specified period.  
- \( T \) = Return period of interest (recurrence interval)  
- \( n \) = Mandatory maintenance period

If \( n = 30 \) and the design flood is for a 50-year return period (recurrence interval) then:

\[ R = 1 - (1 - 1/50)^{30} = .45 \]

If the expected damage for exceeding this design flood (50-year) was $5,000, then the flood damage portion of the financial responsibility equation would be $5,000 x .45 or $2,250.

4. Interest Rates Used Within The Financial Equation
From our perspective, interest rates should be conservatively high since we are trying to assure that this dam will be maintained at some future date. A reasonable number to use would be today's 10, 20 or 30 year treasury bond rates. This rate should be several points above inflation rates and should represent a conservative figure. It is also indicative of our best guess about what we expect future inflation rates to be. The appropriate treasury bond length should be associated with the number of years we consider within the above equation.

D. Demonstration of Financial Responsibility

The current ability to provide enough money for dam repairs and maintenance assures the Department that money will be available throughout the 10-year (or longer) period.

The Department has substantial discretion in requiring demonstrable financial responsibility. Section 31.14(2)(a) provides that the Department, in its own judgment, must be satisfied that a potential owner is financially capable of operating and maintaining the dam for at least 10 years.

A prospective owner must demonstrate financial responsibility on the basis of unencumbered personal assets (net worth) or with outside financial guarantees such as bonds or insurance.

Financial responsibility can be demonstrated in the following ways:

1. A trust or escrow account. Proper legal arrangements must be made to ensure that the money is there, and that it cannot be diverted to other persons or uses without Departmental consent. Escrow funds can only be used for maintaining the structural integrity of a dam, including work on the embankment and spillway structures. The interest earned on the escrow account can be used to offset the inflation factor in the calculation of financial responsibility. If the escrow fund is used to make repairs, a recalculation of the escrow fund amount should be made.

2. A surety bond, payable to the Department. The bond provides money to the Department to have necessary work done if the owner defaults.

3. A first mortgage on other property of the prospective owner has been used and would be acceptable with proper legal arrangements. A certified appraisal of the property to ensure that its value is high enough may be required. A second mortgage is not acceptable.

4. An irrevocable letter of credit by an insured lender to the prospective owner under ch. 405, Stats. It is unlikely that such a letter would be issued. The Banking Commission has indicated that issuing a letter of credit for longer than one year is not a good banking procedure. A 10 year letter of credit has been issued by a credit union. A letter for a period of less than 10 years would not, by itself, provide enough assurance of financial capability. However, we have been able to address all our concerns with a series of 1-year automatically renewing letters of credit.

5. Subsection 31.14(5) provides for the establishment, through administrative rule, of a pool of dollars to be contributed by dam owners (who operate the dam for profit) for repairing and maintaining dams. This provision does not apply to owners with condemnation powers (municipalities and public utilities). The maintenance fund allows risk to be shared among a group of owners, providing a form of self-insurance.

6. Municipalities may use one of the above mechanisms or create a special assessment district under ss. 31.38 and 66.60 or provide other assurance that the municipality has or can obtain sufficient funds to
maintain and/or repair the dam. Generally we have not required municipalities to use methods other than their taxing authority to comply with s. 31.14 for municipally owned dams. However, there is no reason why we should not apply this section to municipalities we believe to have an inadequate tax base.

7. Public inland lake protection and rehabilitation districts may use one of the first six mechanisms described above or provide assurance that the district can make assessments sufficient to maintain and/or repair the dam.

A financial statement is not listed as a means of demonstrating financial responsibility. It does not assure the Department that the assets will be available to pay for needed repairs in the future. A financial statement can be submitted with an application as an indication of the financial status of a prospective owner. The statement can be compared to the cost of estimated damages to determine whether 10 years is a sufficient period of time for financial responsibility determinations. If the owner's assets are questionable relative to replacement cost, we should consider a period longer than 10 years (this would result in more stringent requirement).

Assets must be conservatively estimated. If land around the flowage is listed as an asset, the value should be based on no flowage being present. Assets subject to loss in case of dam failure, such as generating equipment, must be adequately insured and should not be a basis for establishing financial responsibility.

E. Establishing Financial Responsibility

As an alternative to the procedures of s. 31.14(2)(a), the explicit requirements of s. 31.14(3), may be used if appropriate. Under this procedure a person must own the flowage bed and a strip of land around the flowage, agree not to transfer the dam without Department approval and dedicate a parcel of land for public access.

F. Establishing Financial Responsibility - Small Dam, Single Owner

For small, low initial cost dams ($10,000 or less) with a single owner the above requirements may be excessive. Small dams, such as "tin whistle" embankment structures may be built quite economically. When such a dam and flowage is built on the lands of a single owner, no rights accrue to other riparians and less stringent financial responsibility requirements may be in order. An exception might be when exceptional environmental values exist because of the dam and flowage or high risk to life, health or property exists below the dam.

Another reason to require less stringent financial responsibility requirements for these small structures is that the value of the land around and under the dam and flowage could easily exceed the cost of the structure. Appropriate legal arrangements would have to be made to ensure the land remained as security unless other ways of showing financial responsibility could be found.

For these small dams an annual maintenance fund should be sufficient for new construction. For transfer of existing structures initial fix up and an annual maintenance fund should be sufficient.
## COMPOUND INTEREST FACTORS

<table>
<thead>
<tr>
<th>No. of Years</th>
<th>4% Compound Interest Factor</th>
<th>6% Compound Interest Factor</th>
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<tr>
<td></td>
<td>Single Payment Compound Amount Factor Given P, to find S: ((1+i)^n)</td>
<td>Uniform Series Compound Amount Factor Given R ((1+i)^{n-1}) to find S: (i)</td>
<td>Single Payment Compound Amount Factor Given P, to find S: ((1+i)^n)</td>
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### COMPOUND INTEREST FACTORS
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<td>Uniform Series Compound Amount Factor Given (R) ((1+i)^{n-1}) to find S: (i)</td>
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ATTACHMENT 2

[Table here: Maintenance and Repair Versus Reconstruction]
ATTACHMENT 3

SUGGESTED OUTLINE FOR EMERGENCY ACTION PLANS

Summary of Plan - Checklist of Key Actions

A. INTRODUCTION

I. **Purpose & Intent** - Why is an emergency action plan needed in the community? What will the plan do? Should include a statement such as "The purpose of this emergency action plan (EAP) is primarily to safeguard the lives and secondarily to reduce property damage of the citizens of Adams County, living along Spring Creek in the event of flooding caused by large runoff or failure of the Stoney Creek Dam."

II. **Description of Dam** - Provide a brief description of the dam including location, purpose, name of owner, date built. A sketch of the dam is also helpful. If more detail is needed, such as height, maximum storage capacity or other physical data, include in Appendix.

III. **Hazard Area** - Provide a brief description of the area that would be impacted by a breach or major flooding. Describe the populations affected and any critical facilities, such as hospitals, rescue and relief facilities, water supply and/or hazardous waste facilities, and bridges that may be significant. An inundation map should be included to show the extent of the hydraulic shadow, and a proposed time schedule of anticipated events based on historic data should also be included.

IV. **Responsibility and Authority** - Indicate the person or organization responsible for the maintenance and operation of the dam and the persons or groups responsible for implementing various phases of the EAP. The basic authority for carrying out the various components of the EAP should also be cited. See telephone list below.

V. **Periodic Review, Testing and Updating** - This section should provide the basis to update, extend, and improve the emergency action plan and to ensure readiness for executing the plan.

Include a schedule for carrying out periodic reviews of the plan by the participants at intervals not to exceed 1 year with updating for the changes in telephone numbers and personnel as they occur.

Include procedures and schedules for periodic testing of the plan. Special procedures for those aspects of the plan not susceptible to direct testing should be established and periodic exercise simulating emergencies carried out. Consideration should be given to updating (such as use of "controlled copies"), whereby plan holders are advised of any changes.
DAM OWNER/OPERATOR TELEPHONE LIST

1. State Warning Center
   (608) 266-3232

2. Local Police/Sheriff Department
   
   ( )

3. State Police/Patrol
   
   ( )

4. Downstream and Upstream Dams and Operators
   • Dam Name __________________________
   • Telephone ( )
   • Dam Name __________________________
   • Telephone ( )

5. Downstream Residence/Business
   
   ( )

6. Hospital/Ambulance
   
   ( )

7. State Dam Safety Agency
   Name: Richard J. Knitter, Wisconsin Department of Natural Resources, Bureau of Water Regulation & Zoning
   Telephone: (608) 266-1925

8. Contractor
   Name: __________________________________
   Telephone: ( )

9. Engineer
   Name: __________________________________
   Telephone: ( )

Post this list in a prominent place at the dam and give a copy to all of your operators.
VI. **Approval** - This section should provide the means by which all parties to the plan agree to their responsibilities to review the process and educate the public. The following is an example of a format that could be used:

We, the undersigned, this date acknowledge this (ANNEX or PLAN) as a part of the emergency operation procedure to protect life and reduce property damage in case of an emergency at the Stoney Creek Dam.

________________________  ____________________________
Signature, I.M. Dam owner                     Date

________________________
Signature, County Sheriff, Adams County  Date

________________________
Signature, Mayor, City of Springfield                   Date

________________________
Signature, Director of Springfield
Civil Defense                                                                                    Date

________________________
Signature, Chief of Springfield Police                   Date
B. IDENTIFICATION OF EMERGENCY

The procedures and means for assuring timely and reliable identification and evaluation of potential or existing emergencies should be included. These would normally explain the events or conditions which indicate an emergency; define the levels of emergency and when each level is reached; describe the data and information collection system and how information is disseminated to the public; describe the analysis process; designate the responsible person(s); and ensure continuous coverage through designation of appropriate alternatives. Include media plan, shelter and food sites, utility shut-off, evacuation information.

For unattended dams, the surveillance and warning system should be described along with the expected reliability and backup system in place to assure that warning is given in the event of failure in the primary system.

C. PREVENTIVE ACTION

This section should discuss those preventive actions that need to be taken at the dam to prevent or delay failure after an emergency is first discovered. Because of uncertainties about their effectiveness, preventive actions usually would be carried out simultaneously with appropriate notification of an alert situation or warning situation.

D. REENTRY AND RECOVERY

This section should discuss the reentry procedures including road and bridge checks, water, gas and sanitation inspections, and damage documentation. Provide information on reentry routes, sanitation and help for the public, and mitigation opportunities.

Appendices
A. Flood workers: names, addresses and phone numbers
B. Critical facilities: contact, location and phone number
C. Structures in hazard area: residents names, potential access problems
D. Shelters: contact, address, phone number, capacity
E. Map of evacuation routes
F. Equipment (vehicles, sand bags, walkie-talkies, short wave, etc.): contact, phone number
SAMPLE OPERATION PLAN

Dam Name: 

Date: 

Owner Name: 

WHO

1. Who operates the dam? (Owner or other agent/employee)
   Address: 
   Telephone: 

2. Who is the backup operator?
   Address: 
   Telephone: 

3. Who maintains the dam?
   Address: 
   Telephone: 

4. Who must be called in an emergency?
   Address: 
   Telephone: 

WHAT

1. What downstream structures would be affected by a flood?

2. What minimum flow, if any, is required for downstream users?
   25% of natural low flow is minimum allowable
3. What impoundment levels are required to protect upstream users?

   Maximum Elevation
   Normal Elevation
   Minimum Elevation

WHEN

1. When are gates operated during storm events?
2. When are gates operated during normal conditions?

WHERE

1. Where is emergency power?
2. Where is engineering assistance?

HOW

1. How are gates operated?
2. How often is mechanical equipment operated?
SAMPLE INSPECTION/MAINTENANCE PLAN

DAILY

Note water surface elevation
Check security and safety devices
Make required changes in gates and valves
Check spillway outflow channel for debris
Record pertinent information in

Determine reservoir inflow
Check toe and/or gallery drain flows
Read weather gauges and record data
Check log or safety boom
Check instrumentation schedule

MONTHLY

1. Dam and Reservoir
   Check condition of:
   crest of dam upstream and downstream
   faces visible portions of foundation
   abutment contacts
   galleries
   stilling basin(s)
   critical landslide areas
   reservoir area
   drainage systems, toe drains
   measuring devices
   rodent problems
   security and safety devices

2. Electrical System
   Check:
   standby gasoline-engine-driven generator run for a minimum of 1 hour
   keep battery charged
   gas supply
   Replace:
   light bulb

3. Outlet Works
   Grease hydraulic gate hanger
   Check signs that warn public near

4. Spillway
   Check:
   for debris in inlet channel
   for operation of gates
   fence condition and caution signs

QUARTERLY

1. Outlet Works
   Operating instructions - up to date and legible

2. Spillway
   Check and clear bridge drains
Check gate air vents on downstream face
Clean gate control switchboxes
Clean inside of motor control cabinet

SEMI-ANNUALLY

1. Outlet Works
Check:
   hydraulic oil lines
   oil reservoir level in hydraulic system
   rubber seals and seal clamp bar
   hoist cables - lubricate

   Lubricate gate rollers

2. Electrical System and Equipment
Change oil in standby gasoline-engine-driven generator
Check:
   exposed electrical wiring
   outlet works valve house
   gate hoists
   spillway bridge

3. Spillway
Check:
   paint on gates
   hoist cables - lubricate
   mechanical hoist bearings
   flexible coupling bearings
   gear cases
   hoist gear case, replace grease
       spur gear units and gear motors

ANNUALLY

1. Outlet Works
Paint:
   metalworks
   color-coded valves
   woodwork and trim

   Exercise gates and valves
   Check condition of interior and exterior of outlet conduit

2. Dam and Reservoir
   Review the Standard Operating Procedure (SOP)
3. Spillway

Check and repaint metalwork:

on spillway
bridge
gates
fence

Operate and exercise gates
Examine stilling basin and downstream channel

4. Electrical

Check:

electrical conduits
pull-boxes
switches
outlet works valve house
gate hoists
spillway
galleries

5-YEAR PERIOD

Examine intake structure and stilling basin which normally are under water -less frequent if experience indicates
OWNER'S INSPECTION CHECKLIST

Dam Name: ________________________________________________________________

Date of Inspection: _______________________________________________________

Owner's Name: ___________________________________________________________

Any rapid or great change in the condition of your dam should be immediately reported to the State Dam Safety Engineer, Dick Knitter, (608) 266-1925 or the State Warning Center (608) 266-3232.

<table>
<thead>
<tr>
<th></th>
<th>NO</th>
<th>YES</th>
<th>IF YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Cracks?</td>
<td></td>
<td></td>
<td>Monitor¹</td>
</tr>
<tr>
<td>Slumping or cracking on the</td>
<td></td>
<td></td>
<td>Contact state agency or</td>
</tr>
<tr>
<td>upstream or downstream side?</td>
<td></td>
<td></td>
<td>engineer</td>
</tr>
<tr>
<td>Erosion from runoff, wave action</td>
<td></td>
<td></td>
<td>Repair and stabilize</td>
</tr>
<tr>
<td>or pedestrian/vehicle traffic?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Embankment/spillway seepage?</td>
<td></td>
<td></td>
<td>Monitor²</td>
</tr>
<tr>
<td>Seepage water muddy? Boils?</td>
<td></td>
<td></td>
<td>Contact state agency or</td>
</tr>
<tr>
<td>Top of the dam settled?</td>
<td></td>
<td></td>
<td>Monitor³</td>
</tr>
<tr>
<td>Loss of riprap?</td>
<td></td>
<td></td>
<td>Replace and maintain</td>
</tr>
<tr>
<td>Trees, brush or burrows on dike?</td>
<td></td>
<td></td>
<td>Clear trees, brush, fill</td>
</tr>
<tr>
<td>dike</td>
<td></td>
<td></td>
<td>holes and seed bare</td>
</tr>
<tr>
<td>Spillways blocked?</td>
<td></td>
<td></td>
<td>Clear spillway immediately</td>
</tr>
<tr>
<td>Exposed metal rusty?</td>
<td></td>
<td></td>
<td>Clean and paint</td>
</tr>
<tr>
<td>Concrete deterioration or cracks?</td>
<td></td>
<td></td>
<td>Monitor⁴</td>
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</tbody>
</table>
Cracks or uneven movement? □ □ Monitor\(^5\)

Scour? □ □ Monitor\(^6\)

Pipe joint separation? □ □ Repair

Gates non-operation? □ □ Repair and make operational

Trash racks blocked? □ □ Clean out debris

____________________

\(^1\) Monitoring surface cracks in the embankment includes tracking the speed with which the cracks widen, and documenting this development through the use of photographs or instrumentation records. Any rapid development requires immediate notification of the State Dam Safety Engineer.

\(^2\) Monitoring seepage involves determining the quality and quantity of flow through the embankment/dike/spillway. Measure the quantity per unit time, if possible, and note any solid materials carried in the flow, such as sand or other fines. Excessive flows and/or turbid flows require immediate notification of the State Dam Safety Engineer.

\(^3\) Settlement of the top of the dam can be caused by surface erosion or by internal compaction. Rapid settlement requires immediate notification of the State Dam Safety Engineer.

\(^4\) Concrete deterioration may be patched through routine maintenance procedures. Extreme deterioration should be examined by an engineer. Severe cracking or rapid changes require immediate notification of the State Dam Safety Engineer.

\(^5\) Cracks or displacement of the abutments may occur over time. Monitoring includes determining the rate of change. Rapid separation requires immediate notification of the State Dam Safety Engineer.

\(^6\) Scour can be determined by probing the streambed. Abrupt changes or rapid erosion of the streambed requires immediate notification of the State Dam Safety Engineer.
ATTACHMENT 6

DAM PLAN APPROVAL INFORMATION REQUIREMENTS

Provide Very Short Narrative Descriptions for #'s 9 & 11.

1. Drainage area - # square miles
2. Normal head - # feet
3. Structural height - # feet
4. Normal pool area - # feet
5. Maximum pool area - # acres
6. Normal storage volume - # acre feet
7. Maximum storage volume - # acre feet
8. Length of embankment - # feet
9. Description and size of principal spillway -
10. Maximum discharge of principal spillway - # cfs
11. Description and size of emergency spillway -
12. Maximum discharge of emergency spillway # cfs
13. Maximum total discharge capacity - # cfs
14. Flood frequency of total discharge capacity - # years
DATE: April 28, 1993          FILE REF: Dam Drawdown Procedures

TO: District Directors

Insert: Chapter 140, Water Reg. Guidebook

FROM: Robert W. Roden

Distribution: All Water Regulation & Zoning Staff

SUBJECT: Procedures for Dam Drawdowns

The purpose of this guidance is to provide consistent administration of the Department's dam drawdown permit authority with consideration to Chapter NR 103, Admin. Code. These procedures are no different than those required for permit actions under Chapters 30 and 31, Stats., and review and approval under Manual Code 3565.1.

The controlled lowering of the water level on a raised lake or flowage below the ordered or normal minimum level (drawdown) can be divided into two actions: emergency and nonemergency.

An emergency drawdown is performed when the potential of imminent failure of a dam exists which could result in loss of life, health or property. Non-emergency drawdowns occur for actions that can include, but are not limited to:

1. Inspection of the structural integrity of the dam;
2. Non-emergency dam repairs or alterations which are Department ordered or owner initiated;
3. Determining/changing maximum and minimum operating levels under s. 31.02, Stats.,
4. Monitoring/surveillance of seepage or other potential structural problems and
5. Abandonment and removal of a dam under s. 30.185, Stats..

Emergency Drawdown Procedures

The immediate nature of an emergency drawdown greatly limits the actions that can be taken to minimize the adverse impacts on surrounding wetlands. Because of the limited time available, the Water Regulation and Zoning Engineer assigned to the dam is responsible to assure that the following are immediately notified for assistance or informational purposes. The assigned engineer does not have to personally contract the following but is responsible to have Bureau or District staff make these contracts immediately.

1. Dam Owner/Local Property Manager if Department owned
2. County Sheriff's Department
3. County Emergency Government Director
   (2 & 3 can be notified through the State Warning Center at 608-266-3232)
4. Local Warden
5. Local Fish Manager
6. District Water Regulation and Zoning Supervisor and Area Water Management Specialist
7. Downstream Dam Owners
8. District Director and Public Information Officer
9. Area Wildlife Specialist
10. District or Area Water Resources Specialist
11. Bureau of Endangered Resources
12. Bureau of Property Management (if dam is State-owned).

Actions taken by these individuals may help minimize the drawdown impacts. For instance, the fish manager may initiate actions to remove and relocate fish or to limit fishing in the area. Endangered Resources may take necessary steps to inventory the area to determine endangered resource concerns. The local property manager/Property Management may take immediate action to make repairs to the dam (if Department owned) so the flowage can be returned to normal level as quickly as possible. Each of these actions may help to lessen potential adverse impacts on wetland functional values.

Non-Emergency Drawdown Procedures

Non-emergency drawdowns are activities in which the Department is directly involved in the permitting/ordering process and has discretion in parts of the decision making process, and therefore must comply with NR 103. Due to the planned nature of these projects, time is available to investigate the wetland impacts and to consider alternatives to minimize them.

All drawdowns must receive a permit docket number or be associated with an approval which receives a docket number. The drawdown may be addressed in the dam plan approval process as long as the plan approval is given a docket number.

Project coordination responsibilities depend on the type of action associated with the drawdown.

The District Water Regulation and Zoning Supervisor (or designee) is the Project Coordinator for drawdowns including changes in operating levels under 31.02, temporary drawdown for construction and/or excavation within the flowage and other flowage management activities such as overwinter drawdowns.

A Department engineer (bureau or district WZ or PM) becomes the Project Coordinator for drawdowns related to department-ordered and owner-initiated dam repairs.

The Project Coordinator must complete and route to applicable staff:
1) a 3500-23 form,
2) a 1600-1 if required (NR 150),
3) a copy of the plans to the applicable staff in the district/area or bureau.
4) a copy of the Wisconsin Wetlands Inventory Map for the particular flowage or raised lake, and
5) a handwritten summary (due to its confidentiality) of any endangered resource concerns identified in the Natural Heritage Inventory or by Endangered Resources staff.

Applicable staff include but are not limited to:
- local fish manager
- local wildlife manager
- district water resources specialist
- local warden
- district water regulation and zoning supervisor (or designee) or assigned bureau engineer.

The returning comments on the 3500-23 and adjoining forms will help the project coordinator develop the necessary Findings of Fact, Conclusions of Law and Conditions in the Department's Permit or Order.

The attached "Considerations For Impoundment Drawdown" sheet is provided as a guide to help staff in their
analysis of impacts.

**Abandonments**

Abandonments are slightly different and must follow the ss. 31.185, 31.253 or 31.33, Stats., procedures. Wetland impacts are addressed in the 3500-23 form or the environmental assessment or impact statement. Department decisions or other actions regarding dam abandonments must comply with NR 103. However, under the practicable alternatives analysis, most of these projects will have no practicable alternative other than for another party to take ownership. Therefore, the Department's analysis will primarily address alternatives to minimize impacts to wetlands as a result of the abandonment.

Dams removed by the Department are not exempt from these procedures and the Department must follow existing established procedures presently required for all projects regulated under Chapters 30 and 31, Stats., and M.C. 3565.1 approvals.

Reviewed: Larry Larson
Scott Hausmann

Drafted: Dale Simon
Meg Galloway
Considerations For Impoundment Drawdowns
A Guide For Staff In Their Analysis Of Potential Impacts

1. Are any threatened or endangered resources present? Check Natural Heritage Inventory or request assistance from Bureau of Endangered Resources.

2. Are wetlands associated with the existing flowage? Are there downstream wetlands that may be affected by flow fluctuations during drawdown or refilling or due to sediment discharge, erosion etc.? See Wisconsin Wetland Inventory Maps.

3. What type of wetlands (classification) are associated with the flowage?

4. What are the present uses of the wetlands?

5. Will the drawdown adversely affect the uses of the wetlands? For how long?

6. Is the wetland of a vegetative type, non-persistent, that will be destroyed as a result of the drawdown?

7. Does the flowage have any history of containing contaminated sediments? Important for rate of drawdown and potential water quality impacts downstream.

8. If a wetland is present, are the soil types permeable (peat) or impermeable (clay)? Wetlands with impermeable soils are less likely to be impacted by drawdowns as opposed to permeable soils.

9. Is the wetland used for fishery rearing, feeding, or spawning purposes? Will drawdown affect use of the wetland?

10. Is the wetland used for wildlife purposes, feeding, brood rearing, nesting, staging, mating, etc.? Be sure to recognize game and non-game birds, mammals, reptiles, amphibians.

11. Will the drawdown have significant affect on the presences of mollusks, insects, etc.?

12. Please give your recommendations to minimize adverse impacts associated with the drawdown.
CORRESPONDENCE/ MEMORANDUM

STATE OF WISCONSIN

DATE: May 14, 1993

FILE REF: 3560

TO: Water Regulation & Zoning Staff

Placement: Water Regulation Handbook, Chapter 140

FROM: Robert Roden - WZ/6

Distribution: WZ Program Staff

SUBJECT: Program Guidance on Determining the Hazard Rating for Submerged Dams

Guidance

• All submerged dams will be assigned a hazard rating of low.

• The design capacity for the dam will be the flow at submergence or as specified in NR 333.07(3)(a).

• The hazard rating may need to be revised in the future if a downstream restriction causing submergence is subsequently removed or altered.

Statement of Problem

Using the criteria defined in NR 333.06 to determine the hazard rating is unclear when considering a submerged dam. The code does not specify a termination point for analyzing development within the hydraulic shadow and dam nonexistent profiles. Chapter 140 of the Water Regulation handbook does not clearly identify how the hazard rating will be developed for submerged dams either.

Facts to Consider

• "Submerged" means the difference between the water surface elevations upstream and downstream from a dam is one foot or less.

• As defined in NR 333.06, the hazard rating for a dam is determined by development in the hydraulic shadow of the dam and the floodplain/floodway of the dam nonexistent condition and the land use controls in place downstream of the dam.

• When a dam is submerged, the failure of the dam occurs at the point of overtopping, early on the rising limb of the flood hydrograph. Experience has shown the flood wave from the failure is drowned out by the rising limb of the regional flood hydrograph. The resulting profile of peak stages, for the area downstream of the dam, for the failure event is equivalent to the regional flood profile. Because the dam and impoundment in submergence cases is hydraulically insignificant to the regional flood event, the dam nonexistent profile is also equivalent to the regional flood profile.
• Previously developed program guidance, now incorporated into Chapter 140 of the Water Regulation Handbook (140-23), directed the dam failure profile to be carried downstream to the point of convergence with either the dam nonexistent or regional flood profile. This area of inundation has been commonly referred to as the "hydraulic shadow' for the dam. In the case of submerged dams the profiles of concern have already converged downstream of the dam at the peak of the flood. Therefore, there is no hydraulic shadow and there can be no development within the hydraulic shadow or dam nonexistent profile as defined in NR 333.06.

• Since submerged dams have no hydraulic shadow and therefore no development within the hydraulic shadow, no zoning other then regional floodplain zoning is required downstream of the dam.

Summary

When a dam is submerged the dam failure profile, the dam nonexistent profile and the regional flood profile can be considered equivalent and converged at the peak of the flood, downstream of the dam.

Since the profiles have converged there is no hydraulic shadow and therefore there cannot be development within the hydraulic shadow. A submerged dam will therefore meet the requirements of low hazard land use classification.

Only regional floodplain zoning is required to keep a low hazard rating for a submerged dam.

The design flow for the dam will be the flow at submergence.

The Department reserves the right to reevaluate design spillway capacity requirements. This may become necessary if the downstream restriction causing the backwater and subsequent submergence of the dam is removed or altered. If the dam is no longer submerged during the regional flood the full design spillway standards of NR 333 must be met.

Drafted By: Meg Galloway

Reviewed By: Dick Knitter
             Bob Watson
             Ken Johnson
DATE:       June 24, 1994

TO:    District Directors

Placement:  Chapter 3 Floodplain/Shoreland Guidebook; Chapter 140 WRZ Handbook

FROM:      Robert Roden

SUBJECT: Setting the Preliminary and 'Final' Hazard Ratings for Dams.

I. Introduction

It has become necessary for the Department to establish a uniform procedure for establishing the Preliminary Hazard Rating (PHR) and Hazard Ratings (HR) for dams in the State. The purpose of this guidance is to establish these procedures.

The large influx of dam failure studies into the Department is a result of the increase in the number of dam safety inspections and the Municipal Dam Repair/Removal Grant Program. Directives for development of Emergency Action Plans, issued in many Dam Safety Inspection Reports and application for funding under the grant program result in the requirement for a dam failure analysis. Once a dam failure analysis is provided to the Department, we are required to establish a PHR for the dam.

Wisconsin Administrative Code NR 333 requires the Department to determine a Preliminary Hazard according to the criteria in s. NR 333.06 for all existing and proposed dams. There is also reference to a Hazard Rating in s. NR 333.06(3)(a). PHR's are assigned in cases where criteria for determining the ratings can change. HR's are assigned when the criteria are not subject to change. Details explaining the two ratings and when and how the Department is to assign them is also discussed in this guidance.

II. When and Who? The Process

A. Dam Failure Analysis is submitted to the Department for one of the following reasons.

1. Because of a dam safety inspection if the inspecting engineer feels the dam poses a threat to life, health or property (basis for an Emergency Action Plan).

2. Because of the owner's initiative.

3. As the result of a dam reconstruction. What constitutes a dam reconstruction can be found on page 140-37 in Chapter 140 of the Water Regulation Guidebook.

4. Because of an application to construct a new dam.

5. Because of a floodplain study that incorporates the existence of dams.

B. The reviewer assigned to review and approve the dam failure analysis does so as outlined in the
program guidance dated July 29, 1992, and assigns the PHR.

1. Based on what the consulting engineer has determined for a PHR and using all available data, the reviewer will confirm what the consultant has found or establish a different PHR for the dam.
   a. A PHR is to be established based on existing land use control in place and approved by the Department as required by s. NR 333.06.
   b. The assignment of the PHR must be made before the approval of any plans for construction or reconstruction of the dam. The plans must address the spillway capacity requirements of NR 333.07.
   c. It is only possible for the reviewer to assign a FHR if the current land use and the current land use controls in place are not subject to change without Department approval.

2. The reviewer establishing the PHR sends an official determination and assignment of the PHR to the dam owner with the approval of the dam failure analysis. Any requirement to upgrade the spillway capacity to meet standards in NR 333.07 must be addressed in the approval letter. Appeal rights are to be included in the document.

III. How? The Details

A. Using the information in the dam failure analysis and s. NR 333.06, "Land use and land use control classification . . .", the Reviewer determines what Preliminary Hazard Rating should be assigned to the dam. The assignment of a PHR can be looked at as a twostep process. The reviewer looks at the current land use classification first and then reviews the land use controls for a final determination. For the purpose of the following discussion, references to compliant and noncompliant structures means compliance with NR 116. References to Class 1A and 1B, Class 2 and Class 3 refer to Low, Significant and High Hazard dams respectively. There is a chart attached to this guidance intended to assist you through the process.

1. The dam failure analysis will have identified three flooding profiles, all occurring during the regional flood, for the dam and waterway along with an inventory of structures and campgrounds downstream of the dam that may be affected by either or all of the situations. The three situations studied are a) no failure of the dam, b) failure of the dam, and c) dam nonexistent. The last two, failure and nonexistent are used with the structure inventory and s. NR 333.06 to determine the hazard the dam poses.
   a. First the reviewer needs to look at whether there are any campgrounds in the dam failure floodplain (hydraulic shadow). If there are campgrounds the reviewer has to determine whether they are in the floodway or inundated to a depth greater than two feet. If either is true the current land use classification cannot be either a Class 1A or Class 1B. If this first test is passed, the reviewer goes on to look at the location of other structures downstream of the dam.
   b. The reviewer will look at the maps, profiles and inventory for the failure situation to determine if structures are present within the hydraulic shadow. If there are structures in this floodplain, the reviewer determines whether they are compliant structures. If they are, a Class 1A or 1B current land use classification becomes a possibility.
   c. Now the reviewer needs to address whether there are any structures in the dam nonexistent floodplain. If there are none, the dam could have a Class 1A current land use classification. If
there are, the reviewer has to determine what type of structures they are and if they are compliant or not. If the structures meet the requirements of NR 116, the dam could have a Class 1B land use control classification. If the structures do not meet the requirements of NR 116, the reviewer continues the determination process.

d. If the reviewer makes it this far, the dam will be assigned either a Class 2 or Class 3 current land use classification. The reviewer now needs to look at the dam nonexistent floodplain in more detail. Look at the dam nonexistent floodplain to see if there are any campgrounds. If there are campgrounds in this floodplain, the reviewer needs to determine whether they are in the floodway or inundated to a depth greater than two feet or subjected to velocities over two feet per second upon failure of the dam. If either of these criteria is true the reviewer has determined the dam has a Class 3 current land use classification.

e. The reviewer is still looking at information concerning the dam nonexistent floodplain. If there are either homes or government emergency services facilities in this floodplain, and they are in compliance with NR 116, then the dam could have a Class 2 Current land use Classification if either of the following is true:

   i. There is development other than campgrounds, homes or government emergency service facilities within the dam nonexistent floodplain that is not in compliance with NR 116. or

   ii. There are homes or government emergency service facilities within the floodplain of the hydraulic shadow but outside the dam nonexistent floodplain that is in conformance with NR 116.

f. Every dam that did not meet the above requirements along the way will have a Class 3 current land use classification. What this means is that current land use below the dam might include campgrounds that are either in the floodway of the floodplain with the dam nonexistent or inundated to a depth greater than two feet or subjected to velocities over two feet per second upon failure of the dam. Dams having a Class 3 current land use classification might also have homes or government emergency service facilities in the floodplain with the dam nonexistent which are noncompliant.

2. Now on the land use controls portion of the PHR determination. The reviewer looks at what zoning is in place and refers to NR 333.06 to determine how to classify the land use controls.

   a. If the zoning is in place to control development in the hydraulic shadow then the land use control classification is Class 1A. **WARNING, NR 116 ALLOWS CAMPGROUNDS IN THE FLOODWAY IF THEY MEET CERTAIN CRITERIA. REVIEW THE INDIVIDUAL ORDINANCE TO DETERMINE WHETHER CAMPGROUNDS ARE ALLOWED. THE MODEL ORDINANCE PREPARED BY THE DNR DOES NOT ALLOW CAMPGROUNDS.**

   b. If zoning is in place to control development in both the hydraulic shadow and the dam nonexistent floodplain then the land use control classification is Class 1B.

   c. If zoning is in place to control development in the dam nonexistent floodplain then the land use control classification is Class 2.

   d. If there is no zoning to control development in the area downstream of the dam, the land use control classification is Class 3.
B. The two classifications are now combined to determine the PHR or the FHR of the dam. This chart provides you with a guide for determining the PHR or FHR of a dam:

<table>
<thead>
<tr>
<th>LAND USE</th>
<th>LAND USE CONTROL</th>
<th>HAZARD CLASSIFICATION</th>
<th>PHR RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>1A</td>
<td>1A</td>
<td>1</td>
</tr>
<tr>
<td>1A</td>
<td>1B</td>
<td>1B</td>
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<td>1B</td>
<td>1A</td>
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<td>1</td>
</tr>
<tr>
<td>1A, 1B OR 2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>1A, 1B OR 2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1A, 1B, 2 OR 3</td>
<td>3</td>
<td>3</td>
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</tr>
<tr>
<td>3</td>
<td>1A, 1B, 2 OR 3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

The upgrading of the spillway capacity to meet NR 333.07 must be addressed in the approval letter to the dam owner.

IV. Preliminary Hazard Rating vs. Hazard Rating

A. A PHR is established in cases where the rating could change as a result of more restrictive land use controls downstream of the dam.

1. Sometimes, the Department receives a dam failure analysis in its review and approval and a determination is made about what the FHR of the dam could be if the proper land use controls were adopted downstream of the dam. This is the time that a PHR is assigned to the dam.

a. Where the implementation of more stringent land use controls downstream of the dam would lower the FHR, the reviewer must assign the 'higher' PHR, based on the currently adopted and approved land use controls, and explain the possibility of lowering the FHR. As you know, hazard ratings always address the current condition, not the potential future condition.

b. The document assigning the PHR should identify the possibility of the Hazard Rating being lowered following the adoption of the more restrictive land use controls.

c. The dam owner should be instructed to design any reconstruction of the dam using the PHR not the possible Hazard Rating. If the necessary zoning is adopted and approved by the Department to lower the FHR from the PHR, the FHR needs to be assigned and the spillway capacity determined for the design of the reconstruction.

d. The document assigning the PHR should also instruct the dam owner to contact the Department after the necessary land use controls are in place below the dam. This will allow the Department to review and approve the land use controls and assign the FHR.

2. Following adoption and approval of land use controls that result in a lower FHR than the PHR, or in the case where the land use controls are in place necessary to assign the lowest possible FHR for the dam, the reviewer can assign a FHR.

IV. Summary
The Preliminary Hazard Rating, PHR, is assigned to a dam following the approval of a dam failure analysis submitted as a result of either Department or owner initiated action.

The PHR must be assigned before a plan approval for either new construction or reconstruction of an existing dam.

The PHR reflects the current land use and land use controls in place and approved by the Department on the day of the approval and notifies the owner if a change is possible.

If, or when, the land use controls are in place resulting in a lower than Class 3 rating, a 'final" Hazard Rating is assigned. This may be assigned at the time of study approval if all necessary land use controls are in place and approved by that time.

Drafted by: Bill Sturtevant

Reviewed by: Richard Knitter
Bob Watson
Ken Johnson
Scott Hausmann
Larry Larson

PRELIM.GUD
FINDINGS OF FACT

1. The Department of Natural Resources has examined the Hydraulic and Hydrologic analyses, including the dam failure analysis, for the [KEYBOARD](NAME OF DAM) Dam, located in the [KEYBOARD] (QUARTER-QUARTER) 1/4, of the [KEYBOARD] (QUARTER) 1/4, of Section [KEYBOARD] (Section), Township [KEYBOARD] (TOWNSHIP) North, Range [KEYBOARD] (RANGE), on the [KEYBOARD] (RIVER OR STREAM ON WHICH DAM IS LOCATED) River.

2. The analysis was performed and submitted by [KEYBOARD] (NAME OF ENGINEERING FIRM THAT PERFORMED STUDY)

3. [KEYBOARD] (ENGINEERING FIRM) has determined that a preliminary hazard rating of Class [KEYBOARD](NUMERIC HAZARD RATING), [KEYBOARD] (TEXT HAZARD RATING) Hazard, would be appropriate for the dam and the area downstream of the dam.

4. The analyses were performed in compliance with Wisconsin Administrative Codes NR 333, and NR 116.

5. There [KEYBOARD] (IS THERE DEVELOPMENT) development in the [KEYBOARD] (FW OR FF OF WHICH FLOODPLAIN?) downstream of the dam. This was determined through the use of [KEYBOARD] (MAPPING?) and site verification by [KEYBOARD] (ENGINEERING FIRM).

6. a. There is zoning in place below the dam in the [KEYBOARD](ID THE FLOODPLAIN ZONING IF ANY)
   b. Zoning in place below the dam has been approved by the Department.

7. If floodplain zoning were in place and approved by the Department, in the [KEYBOARD](ID THE ZONING NECESSARY FOR THE LOWER HR) a hazard rating of [KEYBOARD] (ID POSSIBLE LOWER HR).

8. The dam as constructed [KEYBOARD] (MEETS NR 333.07 OR NOT?) the spillway capacity requirements of Wisconsin Administrative Code NR 333.07.

9. The Department has determined that the project complies with Section 1.11, Wisconsin Statutes, and Section NR 1.95, Wisconsin Administrative Code.

10. The (preliminary) hazard rating meets the standards of Section 333.06, Wisconsin Administrative
Code.
CONCLUSIONS OF LAW

1. The review has been conducted in accordance with Chapter 31, Wisconsin Statutes, and Chapters NR 333 and NR 116, Wisconsin Administrative Codes.

2. The Department has authority under Chapter 31, Wisconsin Statutes, and Chapter NR 333, Wisconsin Administrative Code, to assign a preliminary hazard rating.

ASSIGNMENT OF THE PRELIMINARY HAZARD RATING

[KEYBOARD](LANGUAGE NEEDS TO BE ADDED SPECIFIC TO EACH DAM THAT REQUIRES SPILLWAY CAPACITY TO BE UPGRADED).

1. The hydraulic and hydrologic analyses are hereby approved in accordance with Chapter 31, Statutes.

2. The (preliminary) hazard rating of Class [KEYBOARD](NUMERIC HAZARD RATING), [KEYBOARD] (TEXT HAZARD RATING) Hazard, is hereby assigned to the dam.

3. The Department reserves the right to review and change the assignment of the (preliminary) hazard rating of the dam should downstream development change at any time in the future.

4. Plans for reconstruction or construction of the dam shall include a stability analysis in compliance with Wisconsin Administrative Code NR 333.05. The hydraulic capacities of the dam are to comply with the requirements of Wisconsin Administrative Code NR 333.07(2) and must be verified in the dam plans submitted to the Department for approval.

5. The spillway capacity shall be upgraded in compliance with NR 333.07 by [KEYBOARD](SET DATE FOR UPGRADE - SEE GUIDANCE).

NOTICE OF APPEAL RIGHTS

If you believe that you have the right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed.

For judicial review of a decision pursuant to sections 227.52 and 227.53, Wisconsin Statutes, you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to section 227.42, Wisconsin Statutes, you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30-day period for filing a petition for judicial review.

This notice is provided pursuant to section 227.48(2), Wisconsin Statutes.

This decision was mailed on ______________.

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For the Secretary

By ____________________________
[KEYBOARD] (REVIEWERS NAME), P. E.
Assistant State Dam Safety Engineer
Bureau of Water Regulation and Zoning

cc. [KEYBOARD] (DISTRICT CC)
   [KEYBOARD] (AREA CC)
HOW TO USE HAZARD RATING CHART

1. Start in the upper left hand corner of the chart with 'NO' positioned under the "FW".

2. Ask the question "are there any campgrounds in the floodway of the hydraulic shadow floodplain?" If you answer yes, move down the chart in the same column until you find a "yes" or a "yes/no", then continue through that row asking yourself the same type of development questions as you go. In this case, go to the third line in the chart and start asking questions.

3. Keep moving across the chart from left to right as long as your answer matches the answer in the chart for development each particular floodplain. Remember to ask yourself whether or not the development meets the requirements of NR 116 for the floodway and/or floodfringe. For "yes" answers this is a must. Otherwise the answer to your question is "no".

4. Remember, it is only possible to assign a Hazard Rating if all the answers match up and the proper zoning is in place on the day the assignment is made by the Department.
DATE:       June 6, 1996       FILE REF: 3550

TO:         Water Regulation & Zoning Staff

Placement:  Water Regulation Handbook, Chapter 140

FROM:       Larry Larson

Distribution:  WZ Program Staff

SUBJECT: Program Guidance on Dam Plan Review Checklist.

Guidance

- Dam Plan Review will be conducted to ensure new dams and dams to be repaired meet "safe dam" standards.

- The design capacity for large dams will be based on the hazard rating.

- Dam Plans and Specifications will be stamped by an engineer registered in the State of Wisconsin. This requires that Engineer to review and have full knowledge of the design and plans.

- Three copies of the Dam Plans and Specifications will accompany each request for review. In the approval letter, up to three additional copies will be requested for distribution, dependent on addenda and changes to the initially submitted copies.

Statement of Problem

Dam plan complexity makes it increasingly harder to evaluate all aspects of the project. S. NR 333 does not specifically outline what criteria to look for when reviewing plans and specifications. Careful analysis of how the dam is to function, and how the surrounding topography/geography affect the serviceability of the dam is crucial to meeting "safe dam" standards.

Facts to consider

"Safe dam" is outlined in NR 116.08(3).

Dam plan review is to include soils, operation, emergency serviceability, ease of maintenance, structural stability and design capacity.
GENERAL DESCRIPTIONS

_____ Foundation soil type and preparation.
_____ Is the dam keyed to the foundation?
_____ Embankment/structural height.
_____ Hydraulic height
_____ Available freeboard at design capacity.

_____ Emergency spillway
  elevations ____________________________ side slopes ____________________________
  bottom width ____________________________ armoring ____________________________
  design capacity ____________________________

EMBANKMENTS

_____ Embankment top width and side slopes. (12' minimum, 3H:1V) ____________________________
_____ Embankment fill soil type,
    compaction method
    maximum lift thickness

_____ Seepage control measures (i.e. cutoff walls, toe drains, anti-seep collars, etc.)

_____ Erosion control addressed on the plans?
_____ Is it adequate? Yes/no

_____ Riprap/bank protection requirements. ____________________________

CULVERTS

_____ Outlet structure type ____________________________

_____ Culvert Length ____________________________

_____ Size, diameter, dimensions ____________________________
Elevations
u/s invert ______________________
d/s invert ______________________

joint treatment ______________________
corrosion protection ______________________
Seepage Control ______________________

SPILLWAYS / GATES

Stoplog control.
A. Is there a lifting mechanism? ______________________
B. Is there a walkway or bridge above the stoplog slots? ______________________
C. Can the stoplogs be removed? ______________________

Is there a low level draw for maintenance/sediment passage? ______________________
Can the gates be lowered against the design head? ______________________
Can the gates be operated in the winter? ______________________
Are gate controls off the dam? Is there a backup method of gate operation? ______________________

Will sediment build-up interfere with gate operation? ______________________

Is a drawdown necessary for repairs? ______________________

Are there stoplog channels for gate maintenance? ______________________

Water Stops ______________________

Gate Design ______________________
Stem Design ______________________
Gate Operability ______________________

MISCELLANEOUS

Are the plans and specifications stamped by an engineer registered in Wisconsin? ______________________
Has the design flow been routed through the proposed dam? ______________________
Will the dam pass the design flow w/out damage? ______________________
Coffer dam design on the plans. Designed to Q10. ______________________
Will a separate permit be required for the cofferdam? ______________________
Are there utility lines crossing the dam? ______________________
Do the plans meet NR 333 standards?

Benchmark established on the dam and off the dam.

Signing (dam warning and portage)

Scour Protection.

Stilling basin design.

Site access and access ownership?

If reconstruction,

Stability Analysis

Hydraulic Capacity Calculations

Drawdown timing and levels coordinated with area WMS, (fisheries, wetland concerns, etc.)

Drafted by: Daniel Baumann
DATE: March 21, 1997

TO: District Directors FERC Coordinators

FROM: Susan Sylvester - AD/5

SUBJECT: 401 WATER QUALITY CERTIFICATION OF HYDROELECTRIC PROJECTS APPLYING FOR LICENSES (OR EXEMPTIONS FROM LICENSE) FROM THE FEDERAL ENERGY REGULATORY COMMISSION

The Department has the authority and responsibility to review applications for hydroelectric projects under the Federal Power Act, the Electric Consumers Protection Act, the Fish & Wildlife Coordination Act, and the Clean Water Act in addition to state public trust responsibilities. This document is intended to assist by Department staff in applying existing standards and rules when making decisions regarding Water Quality Certification of FERC-licensed hydroelectric projects.

I. ISSUE SUMMARY

A. LEGAL

As a result of recent court decisions, the state now has the authority to grant water quality certification for the relicensing of hydropower projects. In 1994, the Supreme Court heard the Tacoma case (Jefferson PUD vs. State of Washington) and established that water quantity is an integral part of water quality. Tacoma also held that water quality certificates can appropriately contain conditions to protect biological and physical uses. Accordingly, the Department must issue water quality certifications or denials instead of simply waiving authority. 401 certification must be done on a case-by-case basis applying the State of Wisconsin's statutory and administrative rule standards to the specific project or projects involved.

Water quality certification decisions already made cannot be modified.

B. ENVIRONMENTAL IMPACTS

Evaluation of water quality impacts should go beyond water chemistry to the biological and physical use standards applicable for the waterway. Habitat impacts caused by operations of hydroelectric projects need to be considered as they affect the biological uses of the waterway. Physical changes due to project operations may affect recreational opportunities, including fishing and boating.

Dams are known to have environmental impacts including, but not limited to, the following:

- Change dissolved oxygen content of rivers
- Change temperature distribution of rivers
- Change pH concentration in rivers
- Block fish passage (movement and migration)
- Alter or block the movement of woody debris (structure) in rivers
- Affect navigation due to both physical blockage, insufficient flows, and low water levels
- Affect incidents of navigation such as wading, swimming, hunting and fishing
- Affect biodiversity
• Cause accumulation of sediment and block downstream transport of sediment
• Affect accumulation and transport of toxic materials and other contaminants
• Affect suitability of water for human consumption
• Downstream flow variations during droughts may impact the assimilative capacity of streams during critical time periods
• Altering habitat due to water level fluctuations
• Changing riverine habitat to lacustrine habitat
• Entrain fish resulting in mortality (immediate and/or delayed) and injury or introduction of fish into unsuitable habitat

In general, dams change the mass and energy flow of rivers, affecting the morphology and ecology of the riverine environment.

II. STATE RULE GOVERNING PROCESSING OF APPLICATIONS FOR WATER QUALITY CERTIFICATION

The State of Wisconsin has adopted procedures for processing applications for water quality certification in NR 299.

A. PROCESS

The procedures for processing water quality certification are contained in Chapter NR 299, Wisconsin Administrative Code. Under these provisions, "all activities which require a federal license or permit which may result in any discharge to waters of the state" must receive a water quality certification. See NR 299.01, WI Adm. Code.

These water quality certification procedures have been adopted pursuant to Section 401 of the Clean Water Act (33 USC 1341) and Sections 144.025 and 147.01, Wis. Stats.

Any applicant for a Federal license or permit which may result in any discharge into waters of the state must make application to the Department for water quality certification. Any conditions we place in our certification become conditions on the license. If we deny water quality certification, the Federal agency cannot issue the permit or license.

The application process is contained in sub. NR 299.03, which outlines the general information that must be submitted to the Department. NR 299.03(2) provides that "the department shall review the application for completeness within 30 days and shall notify the applicant of any additional information reasonably necessary to review the application."

The department has 60 days from "receipt of the complete application" to make its decision. (See NR 299.04 below) 18 CFR Section 4.38(f)(7)(ii) gives us one year to make our decision. If we have not received all necessary information within the one year deadline, we should deny the application without prejudice (prior to the deadline passing) to preserve our right to review the complete application and to attach appropriate conditions.

B. STANDARDS AND INFORMATION NEEDS

Review of applications for water quality certification must be done in accordance with NR 299, appropriate parts follow:
NR 299.04 Department review of water quality certification application.

(1) The department shall, within 60 business days of receipt of the complete application, determine whether it has reasonable assurance that the proposed activity will:

(a) Result in any discharge, and

(b) Comply with the following water quality standards:

3. Water quality standards adopted under s. 144.025 (2) (b), Stats., and 33 USC s. 1313;


7. Any other appropriate requirements of state law as provided in 33 USC s. 1341 (d).

Note: sections 1, 2, 4, & 5 were eliminated as inappropriate for this purpose

C. PUBLIC NOTICE REQUIREMENTS AND HEARING RIGHTS

Under NR 299.05(4), there are requirements for public notices as follows:

(4) Except for applications under Chs. 30 and 31, Stats., the department shall, in the case of a grant or conditional grant of certification:

(a) Notify the applicant, the licensing or permitting agency and known interested persons of its decision.

(b) Cause notice of its decision to be published by the applicant as a class I notice under Ch. 985, Stats. Notice under this subsection shall identify the applicant and his or her address, describe the activity and its location, state the department's determination, and apprise the public of the opportunity to request a hearing under this chapter.

(5) Any person whose substantial interests may be affected by the department's determination may, within 30 days after publication of the notice, request in writing a contested case hearing on the matter under s. 227, Stats. In any case where a class I notice on the application is otherwise required by law or where a contested case hearing on an application for water quality certification will be held under some other specific provision of law, the notice and hearings shall be combined.

(6) Hearings requested under this section shall be contested case hearings, shall be in accordance with the procedures outlined in Ch. 227, Stats., and may not deal with issues that were adjudicated under separate authority. The hearing shall be a de novo hearing on the issue of whether the department should grant, grant with conditions, deny or waive water quality certification.

III. ISSUANCE OF CERTIFICATION IN FERC PROCESS
A. TIMING

Until the application is completed there typically isn’t sufficient information to properly evaluate the project. FERC deems states to have waived 401 certification if no action is taken within ONE year of the request for certification. [18 CFR section 4.38(f)(7)(ii)]

Applications for water quality certification that come in before there is sufficient information should be denied without prejudice so that the Department preserves its right to make an appropriate certification decision after is sufficient information. Typically, there is sufficient information when the draft application is filed. Beware that often the requests for 401 certification are often buried within the text of the Initial Consultation Package, the Draft Application, or Final Application.

When a complete request for water quality certification is received, the Department must follow the shorter time requirements under NR 299 as follows:

NR 299.03(2) The department shall review the application for completeness within 30 days of receipt of the application. The department shall notify the applicant of any additional information reasonably necessary to review the application. An application may not be considered complete until the requirements of the Wisconsin environmental policy act., s. 1.11, Stats., have been met and until all information necessary for associated permits, such as Wisconsin pollution discharge elimination permits under Ch. 147, Stats., has been submitted to the department.

NR 299.03 (3) The applicant shall submit in timely fashion, at any time during the review process, such additional information which the department finds to be reasonably necessary for review of the application.

NR 299.05 (1) The department shall notify the applicant, the federal permitting or licensing agency, and the regional administrator within 120 days of receipt of the complete application of its determination to deny the certification, grant or conditionally grant the certification, or waive certification.

B. COORDINATION WITH 10j RECOMMENDATIONS

Any and all conditions that are to be included in a 401 certification should also be included in the recommendations made directly to FERC under parts 10a and 10j of the Federal Power Act. There may, however, be recommendations that will not legitimately be part of the 401 certification.

C. AUTHORITIES

When issuing conditions or denials (see part D), it is necessary to cite all applicable state authorities. The following list is a partial list of possible state authorities. In order to ensure statewide consistency, the FERC Coordinator must review 401 actions for FERC projects prior to the issuance of the certification in consultation with the Bureau of Legal Services. The project manager should plan accordingly to account for the additional review time.

1. Authorities which address issues of both water quality standards (designated uses and water chemistry criteria) and the public interest:
NR102.04 Categories of Standards  
(1) General  
(2) Fish and Aquatic Life Uses  
(4) Standards for Fish and Aquatic Life

NR 102.14 Taste and Odor Criteria

NR 103 Wetlands Water Quality Standards

NR 104.01 Intrastate Water Classifications

NR 104.02 Surface Water Classifications and Effluent Limitations

NR 105 Surface Water Quality Criteria for Toxic Substances

2. Authorities addressing public interest standards

Chapter 30 Navigable Waters, Harbors and Navigation

30.12 Structures and deposits in navigable waters prohibited; exceptions; penalty

30.19 Enlargement and protection of waterways

30.195 Changing of stream courses

30.20 Removal of material from beds of navigable waters

Chapter 31 Regulation of Dams and Bridges Affecting Navigable Waters

31.02 Powers of Department

31.06 (Permitting Criteria)

31.34 Flow of Water regulated

3. Miscellaneous appropriate authorities

There is a provision in the Clean Water Act for the inclusion of "other appropriate requirements of state law." In the past we have looked at issues such as Endangered Species, water quality needs, habitat, etc.

D. ITEMS TO BE CONSIDERED FOR INCLUSION IN CERTIFICATION

The conditions included in the water quality certification must be tied to water quality or the designated uses outlined in the water quality rules. FERC has taken the position that it will make the decision of whether water quality certification conditions were appropriately included in the certification when issuing the license.

The Wisconsin Supreme Court, in numerous decisions interpreting the "public trust doctrine" relative to Wisconsin's navigable waters, has broadly construed "public rights" and "public interest" as those terms are used in Chapters 30 and 31, Stats. In the 1930's, the Supreme Court held that the public has the rights to use our navigable waters for "sailing, rowing, canoeing, bathing, fishing, hunting, skating and other public purposes." See Nekoosa Edwards Paper Company v. Railroad Commission (1930). In 1969, The Supreme Court held that the public had a "right to clean, unpolluted water" and that the State of Wisconsin had to consider impacts on water quality before issuing permits. See Reuter v. DNR (1969). There have been numerous decisions in the courts since 1969 recognizing the importance of protecting water quality and our water resources. When we are making water quality certification determinations, we must consider the
Items that should be considered for inclusion in a 401 Certification in order to protect public rights and public uses include, but are not limited to:

1. Flow limitations: including
   - run-of-river operations; one possible definition is instantaneous inflow = instantaneous outflow
   - minimum flows; either instantaneous or average daily
   - minimizing daily variation between minimum and peak generation flows
   - ramping rates
   - gauging and maintenance of monitoring of minimum flows
   - maintenance of side channel flows

The conditions should deal with any of the standards outlined above, including dissolved oxygen, temperature, public rights, and public interest standards. Compliance conditions should be considered when the 401 certification conditions are being created. The compliance standards and definitions should be included in the 401 certification.

2. Maximum and minimum water levels in the pool

Different levels may be specified for different times of year and amount of allowable fluctuations may change over different time scales (i.e., daily, monthly, annually) Levels are often tied to D.O., nutrient levels, erosion problems, fish and wildlife habitat and navigation. Different levels may also be appropriate during periods of low flow.

3. Conditions to protect public rights and public uses related to water quality and quantity downstream of a project (including considerations such as dissolved oxygen, temperature control, fish and wildlife habitat and navigation).

   Items for potential inclusion: spillway flows, aerators, turbine venting

4. Maintenance and restoration of fish and aquatic life habitat

   Physical alterations of habitat or channel morphology to maintain or restore existing fish and aquatic life habitat and designated uses.

   Items for potential inclusion: fish cribs; aquatic macrophyte plantings; fish crib installation; removal of obstructions which cause fish stranding

5. Erosion control

   Actions in accordance with 30.19 and public trust statutes. Use of BMP's to minimize erosion into waterways and to assure there is no environmental pollution as defined in 144.01(3).

6. Low flow operations

Means to maintain water quality standards, especially temperature, D.O., pH, and toxic standards during periods of low flow and reduce habitat losses due to dewatering. Low flow operations can have dramatic impacts on assimilative capacity. Variations in flows
during drought conditions can increase amount of time when flows are below needs of wasteload allocation and increase the severity of the problem. In addition, the maximum and minimum operating elevations for the reservoir may need to be modified. If the levels and conditions under which they'll be invoked can be determined in advance, they can also be included.

7. Protection of "designated uses" identified in the water quality standards

The stream classification of rivers with dams is generally warmwater sports fishery. In rare cases, drinking water standards may apply.

8. Fish Passage and Protection

Protection includes items such as exclusion from entering the turbines and downstream passage (safe bypass of the turbines). Attractant and bypass flows should be considered as part of any condition for fish passage.

9. Seasonal Variations in Operations

Changes in operations (such as minimum flows, water levels, etc...) to reflect the needs of fish and aquatic life at different phases of the annual life cycle. Higher minimum flows during spawning season would be one example.

10. Cumulative Impacts

Impacts attributable to the construction, operation, or existence of hydropower projects which may occur, based upon past or reasonably anticipated impacts of similar projects should be considered. In addition, the geographical shifting of impacts due to the specifics of the situation should also be considered, such as when a peaking project discharges into the pond of another project so the effects of peaking aren't realized until downstream of the second project.

E. INTERSTATE WATERS

On interstate waters, the Clean Water Act section 401(a)(1) specifically says that the state in which the discharge originates has the authority for 401 certification. Under section 401(a)(2), the federal licensing agency is supposed to notify EPA of the interstate water quality certification action. EPA in turn, may decide to notify other states affected by the discharge and certification action. If the other state(s) wish they may then request a hearing, before the licensing agency, to raise their water quality concerns at which EPA makes a presentation.

IV. ACTIONS AVAILABLE AND CONDITIONS FOR USE

1. Certification

If the proposed project is acceptable, then the water quality certification is issued to certify the project is in compliance with appropriate state water quality regulations.

NR299.05(3)(d) contains the language associated with granting certification or conditional certification:
(d) A grant or conditional grant of certification shall include:

1. A statement that there is a reasonable assurance the activity will be conducted in a manner which will comply with the standards enumerated in s. NR 299.04 and, if appropriate,

2. A statement of conditions which the department deems necessary with respect to the discharge including necessary monitoring requirements. Monitoring requirements shall include, but not be limited to, provisions that:

   a. At least 5 business days prior to the beginning of the discharge, the applicant shall notify the department of its intent to commence the discharge;

   b. Within 5 business days after the completion of the discharge, the applicant shall notify the department of the completion;

   c. The applicant shall allow the department reasonable entry and access to the discharge site in order to inspect the discharge for compliance with the certification and applicable laws.

3. A statement advising the licensing or permitting agency and the applicant if the activity proposed may require additional authorization under requirements of state law administered by the department which are not related to water quality.

2. Conditional certification

All conditions contained in a water quality certification must be included in a FERC license if they are related to water quality.

See Section 1 above for details covering granting conditional certification.

3. Denial without prejudice

When a request for water quality certification is received before the draft application or when there is insufficient data to evaluate the request (whichever is later), the request should be denied without prejudice. This action preserves our authority and does not pass judgement on the merits of the project. The applicant can reapply at a later date when the necessary information is compiled.

4. Denial

Denial of water quality certification carries special weight in the FERC hydropower licensing process. No license or exemption can be issued by FERC if the state has denied water quality certification.

Denial of water quality certification is made in accordance with NR 299.05(3)(e) as follows:

(e) A denial of certification shall include, a statement explaining why the department does not have reasonable assurance that the discharge will comply with the standards enumerated in s. NR 299.04, and detailing the standards of concern.
5. Waiver

The Department can waive water quality certification by formally issuing a waiver of certification (as done in the past) or failing to act on the certification within one year of the request [18 CFR section 4.38(f)(7)(ii)]. Generally waivers should not be issued.

Waivers are made in accordance with the procedures outlined in NR299.05(3)(c) as follows:

(c) A waiver of certification shall include:

1. A statement explaining the determination that no discharge will result from the activity or that the activity does not fall within the purview of the department’s authority; and

2. A statement advising the licensing or permitting agency and the applicant if the activity proposed requires authorization under requirements of state law administered by the department which are not related to water quality, and, where applicable,

3. Specific recommendations to the federal permitting authority and the applicant for avoidance of waters of the state. When all reasonable alternatives necessarily result in adverse impacts on waters of the state, a waiver may recommend specific project locations, and design and construction techniques which minimize adverse impacts on waters of the state and which minimize overall environmental impacts.

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GUIDANCE PURPOSE AND DISCLAIMER

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PURPOSE

Chapter 88 of the Wisconsin Statutes allows for the creation of drainage districts. Drainage districts can provide effective drainage of large tracts of land through action of a board with the power to plan, purchase, repair and construct drains within the bounds of its district and in some cases beyond the bounds of its district.

MECHANISM

Sections 30.195 (changing of stream courses), 30.20 (dredging), 88.31 (drainage projects which affect navigable streams), and 88.72 (removal of obstructions), afford the Department an opportunity to review drainage district projects which may impact navigable streams.

HISTORY

Uses of wetland for agricultural purposes date back to the mid-19th century. Early wetland uses were primarily restricted to harvesting of marsh grasses. The harvested hay was used for feed, insulation for ice houses, packing of beer bottles, weaving of rugs, and grazing. However, commercial cranberry operations date back to the early 1850's.

Laws providing for the drainage of private land predate the creation of the State. The territorial laws of 1839 P. 117, Section 12, provided that a third party arbitrator was to determine the location of ditches when the
surrounding farmers could not agree. After Wisconsin became a state Chapter 237, Laws of 1852, required a judicial review of drainage projects whenever the involved parties could not agree on the location of drains.

The first laws providing for the organized drainage of lands or community drains were Chapter 398, Laws of 1862, and Chapter 64, Laws of 1871, in which a procedure was established for creating county and town drains respectively. The county and town drainage laws were very similar, differing only in which governmental body administered the law. Chapter 401, Laws of 1891, allowed a quasi-public corporation to be organized under close judicial supervision for the purpose of draining agricultural land. This law allowed for the creation of drainage districts with the power to acquire lands and to go onto others' property for "the purpose of constructing, maintaining and operating drains, canals, ditches or the like for the drainage and reclaiming wet, submerged, overflowed and swamp lands..."

Drainage districts were given the power of eminent domain and the additional authority to dredge or straighten streams beyond the boundaries of its district if it found that such extra territorial projects were necessary to provide an adequate outlet.

In the mid-1890s several dry years encouraged land speculation on many of the central Wisconsin wetlands. The wetlands were quickly cultivated, but crops failed as the wetter years returned in the late 1890s. This spurred some of the most intense activity ever seen under the Drainage District laws.

Between 1900 and 1905 twelve drainage districts were established, draining 320,000 acres.

Chapter 444, Laws of 1907, expanded the powers of drainage districts to allow them to change the course of navigable streams in order to improve drainage. Chapter 557, Laws of 1919, required a permit from the Wisconsin Railroad Commission in order to alter navigable streams and is the forerunner of present Department authority. Between 1919 and the early 1930's there was very little interaction between the Railroad Commission and drainage districts. According to George Steinmetz, former Chief Engineer with the Public Service Commission, that was primarily because the Railroad Commission had a limited staff and was restricted to interest in larger streams and lakes whereas the drainage districts were primarily concerned with drainage of lands which relied initially on networks of small streams.

After the initial drainage of many of the central wetlands, crops failed due to insufficient amounts of nutrients. Continued crop failures forced many of the lands to become tax delinquent and eventually forced transfer of ownership to the counties. The land laid dry and barren and the threat of peat fires became a constant danger.

In the 1930's, the Work Progress Administration (WPA) set out to rectify some of the problems associated with the earlier failed drainage projects. The WPA built some 215 dams in order to reestablish groundwater levels. The higher groundwater helped to control peat fires, reestablish waterfowl areas, and promote agricultural crops such as cranberries and sphagnum moss. After completion of the dams, they were turned over to the local town, county or drainage district. Since many of these units of government were bankrupt or near bankruptcy the state felt compelled to protect the federal investment. Chapter 379, Laws of 1937, established a Water Regulatory Board with a duty to supervise operation and maintenance of the dams and dikes across drainage ditches and streams within drainage districts. The original board had an annual operating budget of $15,000 and existed until 1965. Chapter 163, Laws of 1965, transferred the responsibility of operation and maintenance from the Water Regulatory Board to the Public Service Commission. The interesting change during the transfer was the elimination of the word 'supervise' within the statute. The duties of the Commission then became the operation and maintenance of the dams instead of the supervision of operation and maintenance. The Water Regulatory Board remained in existence but became strictly advisory. The Board's life as an advisor was short lived, however, because Chapter 614, Laws of 1965, eliminated it. Unfortunately, the budget to operate and maintain has disappeared into other Departmental programs. Although the same responsibility remains in place today, it is
this lack of funds that has caused the Department to neglect its maintenance and operational duties on these structures.

Town drains, county drains and drainage districts are forms of drainage organizations existing prior to 1965. Chapter 572, Laws of 1963, revised the drainage laws of the state to create Chapter 88, Wis. Stats. This revision combined all formal drainage organizations into the regulatory review of Chapter 88 effective January 1, 1965.

Because of the DeGayner & Co., Inc. v. Department of Natural Resources, 70 Wis. 2d 936 (1975) case, which expanded the number of streams the Department considered navigable and the State v. Dwyer, 91 Wis. 2d 440 (1979) decision which concluded that the dredging statute (s. 30.20 Wis. Stats.) applies to both navigable and nonnavigable streams, our involvement with drainage districts became routine business through the 1970's.

Chapter 190, Laws of 1977, changed s. 30. 10, Wis. Stats., (Declaration of Navigability) so that a large portion of previously regulated streams were exempted. It stated that any ditch within an established drainage district was declared not navigable unless the Department could show the streams were navigable before ditching or had a previous stream history.

Chapter 339, Laws of 1981, changed s. 30. 10, Wis. Stats., and allowed for maintenance dredging of "farm drainage ditches" that drain agricultural land, without permits from the Department. This legislation still allows the Department to require permits in some cases but overall our involvement with maintenance projects has been vastly reduced. (See Chapter 120, Dredging)

**STANDARDS**

*Statutory*

Section 88.31, Section 88.31, Wis. Stats., requires drainage districts to apply for permits form the Department whenever projects affect navigable streams. Section 88.72, Wis. Stats., deals with drainage district projects which require the removal of a dam or obstruction in order to adequately drain the district. If the court finds that such projects will involve navigable bodies of water, it will direct the Board to file an application under the procedures of s. 88.31. The Department must grant a permit under s. 88.31, Wis. Stats., if it finds that:

a. The public health and welfare will be promoted.

b. The work is necessary to the proper operation of the drainage system.

c. The project will not materially impair navigability, public rights or public uses in the waters involved.

In addition to the above, s. 88.31, Wis. Stats., also declares scenic beauty as a public right which must be considered by the Department.

Section 30.19. Section 30.19, Wis. Stats., is applicable to drainage district projects. The following standards are applicable:

1. The project will not injure the public rights or interest.

2. The project will not cause environmental pollution as defined by s. 144.01(3), Wis. Stats.

3. The project conforms to platting and sanitation laws.

4. No material injury will result to the rights of any riparian owner on any affected waterway.
Section 30.195. Section 30.195, Wis. Stats., is applicable to navigable streams. The following standards require that:

1. The project must improve the economic or aesthetic value of the owner's land.
2. The project must not adversely effect the flood flow capacity of the stream.
3. The project must not be detrimental to public rights or the rights of other riparians located on the stream.

Section 30.195, Wis. Stats., does not apply to municipal or county owned lands in counties having a population of 500,000 or more.

Section 30.20. Section 30.20, Wis. Stats., requires that:
1. Dredging permits be consistent with the public interest.
2. Dredging contracts be consistent with public rights, protect the public interest and the interests of the state.
3. No contract can run for a longer period than five years.
4. A mining contract can run for no longer than 75 years.

Administrative
1. Wetlands. NR 1.95, Wis. Adm. Code, establishes general standards to be applied by the Department in decisions affecting wetlands. The Department presumes that wetlands are not to be adversely impacted or destroyed. NR 1.95 further specifies the balancing-test to be used by the Department when determining whether to grant a permit for a project which affects wetlands.

2. Shoreland areas. NR 115, Wis. Adm. Code, establishes administrative standards to be followed by counties in their administration of shoreland zoning ordinances. These standards should be reflected in approving drainage district projects.

3. Floodplain areas. NR 116, Wis. Adm. Code, establishes administrative standards to be followed by local units of government and the state. Permits or orders for channel changes or dredging should require applicants to conform with standards established in NR 116.

4. Environmental impacts. NR 150, Wis. Adm. Code, establishes procedures for determining whether a given project requires an Environmental Impact Statement (EIS). Channel changes and maintenance dredging are Type III actions (do not normally require an environment assessment). New dredging projects are Type II actions.

5. Dredging. NR 345, Wis. Adm. Code, establishes procedures to be used during the permitting process. It enables the investigator to determine if a permit should be issued or denied. The code uses two standards to determine the appropriate action, 1) whether or not the project will adversely affect the environment and, 2) whether or not the project is consistent with the public interest in the water involved.

6. Hydraulic Dredging. NR 347, Wis. Adm. Code. Regulation of dredging projects does not include a standard as such. The purpose of this rule is to provide a single mechanism to assure that the water regulation program, the industrial wastewater program, the waste treatment plan approval program, and the solid waste management program are appropriately reflected in decisions which regulate dredging made by this Department.
**Attorney General's Opinions**

1. **OAG 17-74** - States that shoreland zoning adjacent to artificial bodies of water such as drainage ditches is applicable. The artificial ditch involved must be navigable, however.

2. **OAG 95-74** - Clearly states that the agricultural exemption of s. 30.19, Wis. Stats., does not apply to drainage district projects because the drainage district statute (s. 88.31, Wis. Stats.) is more specific in nature and would take precedence over s. 30.19. The reasoning in this opinion seems to suggest that drainage districts are exempt from s. 30.19, Wis. Stats., if the work is restricted to unconnected ponds or grading on the bank.

3. **OAG 117-74** - States that 30.20, Wis. Stats., is applicable to maintenance dredging projects within drainage districts.

**Note:** Since s. 30.10, Wis. Stats., "Declaration of Navigability" was changed after these opinions were issued, some of the Attorney General's conclusions may no longer be applicable. They should be read carefully with those changes in mind.

**Bureau of Legal Services Opinions**

1. **October 31, 1974, Memo.** It was stated that the Department has the ultimate control of operation and maintenance of dams constructed on drainage ditches, regardless of whether or not the drainage district is solvent.

2. **January 24, 1975, Memo.** The Bureau of Legal Services outlined the relationship between ss. 30.20 and 88.31, Wis. Stats., when dealing with maintenance dredging projects within drainage districts. See Procedures Section in the next part of this chapter.

**Secretary's Directive**

In a memo dated December 6, 1977, Anthony Earl outlined to the District Directors and Water Management Investigators, how the Department would handle maintenance dredging procedures within drainage districts. This memo was a result of a compromise agreement between the Secretary and the Governor's office in which the Governor agreed to veto a bill in exchange for the Department expediting permit procedures within drainage districts. See the Procedures Section in the next part of this chapter.

**PROCESS**

The law is quite clear and directs that all drainage district projects be handled through the procedures set forth in s. 88.31, Wis. Stats. However, in the past some flexibility has existed with drainage district projects.

The Secretary's office and the Governor's office have agreed upon the procedures to be sued for maintenance dredging projects. Secretary Earl's December 6, 1977, memo directs staff to require only a s. 30.20, Wis. Stats., permit for maintenance projects, rather than s. 88.31, Wis. Stats., permit. The chief advantage to using s. 30.20, Wis. Stats., rather than s. 88.31, Wis. Stats., is that it does not require that a hearing be held. All new (not maintenance) dredging projects and projects of significant size (those requiring a judicial assessment) must be processed under s. 88.31, Stats. If the project is above the District's present budget, it will move to seek additional money before a local court via judicial assessment. In these cases, the court will direct the District to apply for a s. 88.31, Wis. Stats., permit rather than a s. 30.20 permit. Some discretion must be exercised when determining which statute to apply. As directed by the Secretary's office, we would like to handle as many maintenance dredgings as possible under s. 30.20, Wis. Stats., but the permit process will not be expedited if it becomes obvious that a special assessment is in line. In these cases, it may be desirable to start the permit
processing under s. 88.31, Wis. Stats. It may be advisable to consult with bureau staff to determine the appropriate statute.

Section 88.63, Wis. Stats., provides a fund to be used by the District for yearly maintenance projects. Although not technically correct, many districts have used this fund to dredge navigable streams.

Section 88.72, Wis. Stats., deals with the removal of obstructions, natural or artificial, from the outlet of drainage districts. The procedure set forth in this section requires action under s. 88.31, Wis. Stats.

Section 88.72, Wis. Stats., application will always be preceded by a judicial hearing. At that hearing, the court will determine if the project is necessary. If it finds that the project is necessary to afford an adequate outlet and that the project will affect navigable waters, it will direct the drainage board to apply for a permit as provided in s. 88.31, Wis. Stats.

APPLICATION

If the project is to be processed under Chapter 30 authority, the application should be treated the same as any other ss. 30.19, 30.195 or 30.20, Wis. Stats., permit (See Chapters 100, 110 and 120)

If the project is to be permitted under s. 88.31, Wis Stats., the application must contain:

a. A certified copy of the petition for establishment of the drainage district.

b. The report of the drainage district board.

c. A statement that the public health or welfare will be promoted by this project.

d. A statement that public rights will not be materially impaired by this project.

e. A statement that the public uses will not be materially impaired by this project.

f. A plan view of the project.

g. A profile of the stream bed before and after.

h. Existing and proposed cross sections.

i. Existing hydraulic structures such as dams or bridges on the waterway within the project area and within 1,000 feet.

j. A complete hydraulic analysis may be required from the applicant depending upon the complexity of the project.

k. Section 88.31, Wis. Stats., requires that the application "shall be duly verified." In order to meet this requirement, the application should be signed and notarized by all three Board members.

l. Any other information needed to determine if the project is necessary and will promote public health and welfare.
NOTICE REQUIREMENTS

After the Department receives a completed application under s. 88.31, Stats., it must set a time and place for a hearing between three and eight weeks after receipt. Note that the Department does not consider an application complete until the required environmental impact assessment is completed.

The notice procedure is under s. 88.05, Wis. Stats., which specifies a class three hearing notice. The Statute requires that the mailing list include the chairman of the county highway committee, the chairman of the soil and water conservation district in the county involved, the secretary of the Department, any railroad company involved and all owners of record whose land may be affected.

The removal of dams by drainage districts is treated somewhat differently and requires the notice procedure provided by s. 31.06, Wis. Stats.

FIELD INVESTIGATION AND REVIEW CONSIDERATIONS

After a application is received a field investigation will be made by Department staff to determine whether the required findings of fact can be made. A field investigation form (3500-23) should be completed. Types of information to be considered during the field investigation and technical review include:

1. **Structures**

   The applicant should have provided information about structures (culverts, bridges, dams) in the area of the proposed drainage project. (See Chapter 70, Structures.)

   If there are any other structures present, such as dikes, levees, retaining walls or training walls, make a sketch of them and include dimensions. Prepare a scaled map and take photographs if necessary. Any obstructions to the flow of water should be noted and sketched.

2. **Stream Characteristics**

   Take representative photographs upstream and downstream of the project site. Examine the bank and bed materials to determine the cohesiveness of the material and the organic content. To estimate these parameters, pick up a sample and squeeze it to determine cohesiveness. Note color and odor to indicate organic content.

   The condition of the bank and any indication of slumping, erosion or failure should be noted and documented. The angle of repose is one way of determining whether the stream bank is stable. This angle may be estimated by finding a stable bank and measuring the slope of the bank. If none of the adjacent banks are stable, the angle of repose will have to be estimated based on the existing soil and its measurable properties. (See handout "Saving Your Shoreline" for further grading information.)

3. **Flood Flow Capacity**

   An altered watercourse must have a hydraulic capacity at least as great as the section it is replacing. In practice, the capacity is generally evaluated during bank full conditions. Normally, straightening a stream or dredging it out will increase the flow capacity through the project site, although, undersizing could exacerbate flooding.
The biggest hydraulic problem with drainage projects will probably be the aggravation of downstream flooding. As the stream channel extends into the upper reaches of the basin and the lower reaches become straighter, storage is removed from the area. The result is that flood waters reach the downstream areas quicker and in higher volumes. Increases due to small projects will be hard to document. As projects increase in size, they may merit a more detailed analysis in an attempt to model the effects of lost basin storage. If it can be shown that downstream flooding will be increased, the riparians affected should be notified and give their consent pursuant to NR 116.

Some projects may be overdesigned in an attempt to reduce flooding. Overdesign is a common problem with drainage projects which can result in excessively low normal stream velocities. Constant low stream velocities will result in rapid sedimentation within the channel and a shortening of the dredging cycle. Scour is a necessary channel characteristic which must occur frequently from a channel maintenance standpoint and a fishery standpoint, yet excessive scour can quickly destroy a drainage project. The balancing point is a channel which scours clean and a bank which remains stable. One solution to overdesign may be the addition of a sub channel which helps confines lower frequency events and drives normal velocities upward. Hopefully the smaller channel will scour out on a periodic basis.

4. Erosion and Slumping

Most stream straightening increase flow velocities by shortening the channel length which in turn steepens the gradient. This can result in increased bed and bank erosion. The significance of increased flow velocities depends upon the bed and bank material. Coarse, rough materials like cobbles and gravel are more resistant to erosion than clay, fine sand and unconsolidated sediment which may be very sensitive to increased velocities. If erosion is a problem, the applicant should be required to place riprap or other erosion control devices in appropriate places.

The review should also evaluate possible downstream effects of the project, including increased erosion of downstream riparian's land or potential erosion and undermining of downstream structures. The banks may become unstable if velocities or flow volumes are increased. The investigator must be satisfied that downstream bank slopes will be stable before approving the project. Riprap should be required where necessary.

5. Soil Disposal

Dredge spoil should be placed to minimize the possibility of erosion back into the ditch. A requirement in the permit to level all spoil material and seed and mulch the bank area and spoil deposits may suffice.

6. Timing of Project

Timing of stream dredging or straightening is important to insure revegetation and stabilization of ditch banks and immediate upland areas. Work in drainage ditches has traditionally occurred during the winter time. This practice is popular because of the ability to enter to work site on frozen ground. During the winter contractors and equipment are generally readily available. Work done in the winter presents a maximum opportunity for erosion and sedimentation because the disturbed areas will be unprotected and unstable during spring runoff. Little opportunity exists to reduce erosion potential for work done in the winter. A straw or chopped stalk mulch layer will help to reduce erosion and sedimentation. Because of the potential for damage to the stream due to winter dredging operation, we should discourage it whenever reasonable alternatives exist.

Timing is also important to fish spawning activities. Dredging during spawning, incubation and fry periods should be discouraged.
7. **Biological - Chemical**

Drainage projects may be detrimental to fish and wildlife due to increased erosion and sedimentation, changes in the surrounding water table, streambed disturbance or changes in the stream's flow characteristics. Large tracts of diverse wetlands may also be converted to uplands destroying critical wildlife habitat.

The field investigation by Department staff must include a determination and evaluation of the fishery and wildlife values in the project area and the effect to the project upon them.

Staff should document any objections to the project and suggest possible ways to minimize the project impacts. If the project will significantly damage habitat and the damage cannot be minimized, they should object to the issuance of the permit.

Some possible effects of drainage projects that should be considered in any evaluation include:

- **A. Increased turbidity:**
  
  Suspended solids will increase at the site and downstream when the channel is straightened or dredged. Suspended solids will remain high as the channel adjusts to new velocities, gradient, bank and bed material. Bed material movement will increase in the new channel and the new bed will lack organic food and substrate material.

  Light transmission will be temporarily reduced in the new channel and downstream because of the increased sediment transport.

  Erosion and sedimentation have been described as having the most insidious effects on aquatic life, in that the process may go unnoticed and the damage can be widespread, cumulative and permanent. Unlike most causes of poor water quality, erosion and the resulting increase in sediment transport may be triggered by drainage projects and then may continue to increase or even accelerate after the drainage project has been completed. The impacts of drainage projects may persist on site and downstream for years as a result of thalweg establishment and channel adjustments.

- **B. Temperature change:**
  
  Excavation of an existing ditch or new channel is preceded by clearing and grubbing. The loss of streamside vegetation may increase the daily fluctuation of water temperatures. Daytime temperatures will increase and nighttime temperatures will decrease. Also, daytime temperatures may be reduced because of higher flow velocities.

- **C. Habitat loss:**
  
  Drainage projects can result in a straight uniform channel. Pools, riffles, undercut banks and other preferred habitat are eliminated. Total water edge habitat will be reduced significantly. Diverse wetland may be converted to upland.

- **D. Runoff:**
  
  Drainage projects may also increase or decrease runoff and sediment discharge from the adjacent land. If the runoff is agricultural drainage, salts, nutrients and pesticides may be added to the
stream. Improved drainage can increase the rate of groundwater discharge resulting in a lowering of the water table and less water for sustaining stream flows during dry periods.

E. Levels and Flow:

Drainage projects may have a significant impact on levels and flows in adjacent bodies of water. Impacts on adjacent bodies of water should be thoroughly investigated. If the drainage ditch is controlled by a dam, levels and flows should be specified within the order.

8. Other Public Rights

As stated earlier, scenic beauty in s. 88.31, Wis. Stats., is stated as a public right to be considered by the Department. Few of us are experts in defining scenic beauty. Fortunately, both Dan Holzman and Scott Hausmann of the central office are experts in scenic beauty. They should be consulted on all drainage district projects and especially where a little extra hot air is needed. Changes in navigation are also public rights which must be considered.

FINAL DISPOSITION

A permit for new drainage projects or to straighten, deepen or clean existing ditches under s. 88.31, Wis. Stats., will be issued or denied by a Division of Natural Resources Hearing Examiner.

Any person objecting to the decision issuing or denying a permit may seek judicial review by serving and filing a petition in accordance with the provisions of s. 227.15 and 227.16, Wis. Stats., within 30 days of the decision date.

MONITORING

Permits issued under s. 88.31, Wis. Stats., should require a five day notice period to the Water Management Specialist before the start of construction. The Department staff should inspect the project to make certain that the permit is complied with. Drainage Boards are required by Statute to inspect ditches within the District and assess needed maintenance on an annual basis. These annual inspections are a good time for Department staff to evaluate the success of past projects, as well as the need for future projects.

EMERGENCY PROCEDURES

There should be no emergency issuance of ss. 88.31 or 88.72, Wis. Stats., permits. Obstruction to natural flow that appears to be an emergency may be handled by individuals under the provisions of s. 88.90, Wis. Stats.

ENLARGEMENTS

The September 11, 1974, Attorney General's opinion, 63 OAG 355 (1974), clearly states that the exemption for agricultural enlargements does not apply to drainage districts. Therefore, all new ditches within drainage districts draining into navigable streams require permits under s. 88.31, Wis. Stats.
EDUCATIONAL

Generally wetland preservation will be our main educational thrust. We should concentrate on the many beneficial effects wetlands have on our ecological system.

Publications which may be useful.
1. "Wetland Use in Wisconsin" DNR - 1976
2. "Protecting Wetlands in Shoreland Areas" - DNR

REGULATIONS

a) Statutes: 30.195, 30.20, 31.02, 88.31, 88.72, 88.90
b) Administrative Codes: NR 195, NR 115, NR 116, NR 150, NR 345, NR 347
c) Manual Codes: 3506.1
d) Court Cases: Rude v. St. Marie, 121 Wis. 634. (1903), In Re Horicon Drainage District, 136 Wis. 227 (1908), In Re Dancy Drainage District, 129 Wis. 129 (1906)
Legal Opinions: 63 OAG 355 (1974)

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GUIDANCE PURPOSE AND DISCLAIMER

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule apply. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance cannot be relied upon and does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decision made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes, common law and administrative rules to the relevant facts.

This file is an electronic version of a chapter of the Waterway and Wetland Handbook. This document was scanned from the master handbook chapter kept at the Bureau of Fisheries and Habitat Protection central office in Madison. All effort was made to ensure this scanned electronic copy is an actual copy of the hardcopy document. Due to the electronic scanning process, there may be rare instances of typographical errors, omissions or improperly formatted pages. Please refer to the master handbook if accurate transcription is required.

PURPOSE

Cranberry culture cannot exist without a constant supply of water. Therefore, the cranberry laws came into existence over 100 years ago to ensure that supply by granting the right to build dams and other works. These cranberry culture rights have caused a conflict with the public rights in these waters.

MECHANISM

The Cranberry Growers Association (the official representative for cranberry growers per Sections 94.35, Wis. Stats.) and the Department reached a Cooperative Agreement on February 19, 1982 (copy attached). The agreement outlines the procedure to handle all complaints. This agreement must be followed in all regulatory proceedings by the Department.

HISTORY

The Indians were the first to harvest the wild fruit in the marshes which formed eons ago after the retreat of the great glaciers ended the Ice Age. The old glacial lake bed covered parts of southern Wood County, and scattered parts of eastern Jackson, northwestern Monroe and northwestern Juneau Counties. One area has come to be known as the Cranmoor District (Wood County) and the other, Mather-Warrens District (Jackson to Monroe Counties). Later the cranberry industry developed into Washburn and Burnett Counties and, more recently, into Price, Vilas and Oneida Counties.
When French voyagers ventured into Wisconsin from Canada in their search for furs to trade with the early fur companies, they saw the Indians harvesting wild cranberries. Leseur, in "Fort on the Mississippi" (1700), says that the Indians made an encampment in the place where they went annually to gather cranberries or "Atoqua" as the Algonquin Indians called them.

In 1828, a New Englander, who became a pioneer storekeeper in Green Bay and later in La Crosse, took eight boatloads of cranberries from Green Bay, Wisconsin, to Galena, Illinois. The fruit was exchanged for provisions to supply a camp of Indian shinglemakers who were working for a merchant at the mouth of the Yellow River in Juneau County. In 1829, another early settler mentions the purchase of three canoe loads of cranberries brought down the Yellow River by Indians from Cranmoor marshes.

A considerable trade in wild cranberries was carried on in Juneau County with the Winnebago Indians in 1849. The Wisconsin berry crop became so important that a law was passed providing a penalty of $50.00 for picking or having unripe cranberries in one's possession before the harvest date of September 20.

The cultivation of the wild fruit seems to have begun in the Berlin area in 1858. A year later the crop was too large to harvest completely. Commercial growing of the wild berry was well established, and by 1865, there were one thousand acres of improved marsh in the Berlin Area. Indians brought in the harvest, much of which was shipped to the Chicago market.

The preamble to Chapter 40, Laws of 1867 reads as follows: "An Act to encourage the cultivation of cranberries." The Act expressly conferred upon cranberry growers the right "to build and erect, keep up and maintain such dam or dams upon and across any stream, ditch, sluice, slough or any body of water, as shall be necessary for the purpose of flooding said marshlands."

In 1870, when Whittlesey and Balch, two young cranberry pioneers, went exploring for good cranberry raising country, they described the region in Juneau, Jackson and Wood Counties as "a vast uninhabited wilderness of level, wet marsh consisting of spongy peat, two to twenty feet deep, interspersed with islands of two to two hundred acres of higher sandy land, covered with pine, tamarack and tangled brush, shading off to spaces of open marsh where patches of wild cranberry vines could be seen with their crop of unagatred red berries awaiting the coming of adventurous, fortuitous pioneers such as we."

During the decade 1870 to 1880, cranberry bogs were literally hacked by hand out of the wilderness. Roots were dug out by manual labor. A special plow was devised to "scalp" or remove sod from areas to be sanded and planted to vines. Ditches were dug around sections of the bog to drain off surface water into a main drainage system.

After 1893, three cranberry experiment stations were established to advise growers. Later the stations were consolidated into one in Cranmoor Township, and this was operated from 1903 to 1917. Now the Wisconsin Agricultural Extension division maintains a branch station near Cranmoor.

Vines were first imported into Wisconsin in 1871 and came from New Jersey. But the most important variety grown in the state was developed in 1893 from a native berry by a Wisconsin farmer, Andrew Searles. The berry was named Searles Jumbo in his honor and in recognition of its size.

Chapter 61, Laws of 1878, was the first amendment to the cranberry laws which spelled out that only owners of "cranberry lands" are permitted to divert water under such grant of authority.

Chapter 32, Laws of 1883, was a further amendment which added language describing the purposes for which diverted water may be used: "for the purpose of bringing and flooding, or draining and carrying off the water
from such cranberry growing lands, or for the purpose of irrigation, fertilization and drainage of any other lands owned by such person...." This is now chapter 94, Wis. Stats.

Later amendments did not significantly change the rights conferred under the Act of 1867.

In Wisconsin common law gives the riparian the right to use the water of the waterway in a reasonable way for such purposes as irrigating his land. However, there is a marked distinction between the diversion of water to irrigate crops and the diversion of water to grow cranberries. The purpose of irrigating crops is to promote growth while the diversion of water for growing cranberries is to flood the fields to protect the berries from frost, to kill insects or weeds and to prevent winter-kill and also harvesting. It is unclear whether this use of water falls within the common law rule permitting the use of water for irrigation. It is unknown whether the legislature in passing the original cranberry law was trying to favor the cranberry growers or if they were attempting to amend the common law rule of irrigation by giving cranberry growers greater rights than other riparians.

The constitutionality of the Cranberry Laws has been questioned, but the Supreme Court has avoided ruling on that question.

The fact that only two major cases went to the Supreme Court was most likely due to the small number of new marshes that were constructed since 1900.

The first cranberry law decision by the Wisconsin Railroad Commission was made on November 30, 1918, on the application of the McKinzie Lake Cranberry Company for permission to divert water from McKinzie Creek (22 WRCR 216). The commission found that the project as proposed would not adversely affect riparian owners on the McKinzie Lakes. However, jurisdiction was retained to protect the riparian owners in the event that the diversion would later adversely affect riparian owners.

The next decision was in 1935 when the Public Service Commission assumed jurisdiction over an application made by a cranberry grower for a permit to construct a dam on a navigable stream (9 WPSC 583).

There have been a total of 12 proceedings covering all water diversion matters in which cranberry growers appeared before the PSC and DNR. Most of these proceedings were brought under ss. 30.195, 31.06, and 31.14 (now 30.18), Wis. Stats. Otherwise, the growers operated under Section 94.26, Wis. Stats.

**Supreme Court Cases**

**Cranberry Creek Drainage District v. Elm Lake Cranberry Company**, 170 Wis. 362 (1920) Cranberry growers have the right to divert a natural watercourse. "It is clear that whatever rights were granted to the owners of the land adapted to cranberry culture they were not paramount to rights involving the public health and welfare, but subordinate thereto."

**State v. Zawistowski**, 95 Wis. 2d 250 (1980) - Section 94.26, Wis. Stats., exempts cranberry growers from getting a section 30.18, Wis. Stats., permit. Use of water is limited by the common law reasonable use doctrine.

The court also stated, "The position of the agencies charged with enforcement of the permit law has been most ambiguous. In fact, from the record it seems clear that most of these actions have indicated that the growers were governed by the cranberry law."

**Attorney General Opinions**

In 45 OAG 36 dated January 23, 1956, the Attorney General stated that cranberry growers constructing dams on navigable steams under the authority of Section 94.26, Wis. Stats., must secure a permit under Chapter 31.
In 54 OAG 24 dated April 12, 1965, the Attorney General stated that an owner of cranberry lands may not divert water from a navigable lake or stream under s. 94.26, Wis. Stats., without a permit under s. 30.18, Wis. Stats. This opinion has been overturned by the Zawistowski decision.

**Department Interpretations**

The Public Service Commission (PSC) and the Department have not taken an active stand on asserting jurisdiction over cranberry operations. It was the opinion of PSC staff that they did not have the jurisdiction, and it was not until the early 1970s that Department staff started to investigate complaints and assert jurisdiction.

Following the Zawistowski decision, the Department requested another opinion from the Attorney General on regulatory enforcement authority. Attorney General Bronson LaFollette sent a letter to Department Secretary Anthony S. Earl on August 4, 1980, with his informal opinion. He indicated that the Zawistowski decision should not be interpreted to hold cranberry growers exempt from all water regulatory statutes enacted to protect public rights. Public rights in waters must always be presumed to override private interest.

**STANDARDS**

Section 94.26, Wis. Stats., indicted that no dam or ditches shall injure any other dams or ditches constructed or maintained for a like purpose by any other person. Section 94.27, Wis. Stats., requires the person building such a dam shall be liable to the persons whose lands are overflowed or otherwise injured.

The Corps of Engineers has taken jurisdiction on some marsh expansion and also new marshes under Section 10 and Section 404.

**PROCESS**

**Application**

At the present time, according to the cooperative agreement, the cranberry growers will not apply for any authority under Chapters 30 and 31, Wis. Stats.

**Administrative Rules**

NR 115 - Flooding, dike and dam construction, and ditching shall be allowed for the purpose of growing and harvesting cranberries.

**Notice Requirements**

Since no permits are applied for, no notice is required.

**Field Investigation**

When the Department has or receives a complaint the first step by the agreement is for the investigator to contact the grower to determine what the conditions are and/or what is proposed.

Once the proposal is understood, the investigator should determine the field investigation considerations recommended by referring to the handbook chapters relating to each type of activity (i.e., diversion, new dam, dredging, ditching, etc.)
Final Disposition

The procedure to follow is outlined in the agreement between the Department and the growers and is intended to provide a reasonably expeditious mechanism to resolve conflicts.

The Department entered into this agreement as a reasonable way to deal with this important element of Wisconsin agriculture. Robert W. Roden has been appointed to serve as the Department liaison with the growers. It is expected that the great majority of situations can be handled at the district level without resorting to the more formal liaison process.

ENFORCEMENT

If a situation cannot be resolved by the agreement, the Department may seek judicial relief through Circuit Court or s. 30.03, Wis. Stats.

The Bureau of Legal Services has indicated that the next enforcement case they process has got to be clearly causing environmental damage or interfering with public rights.

EDUCATION

Agricultural Chemicals . . . . What They Are/How They Are Used, Manufacturing Chemists Association Library of Congress #63-14299.

Analyses of Cranberry Marsh Discharge Waters, Unpublished, Dr. John G. Konrad, Marc A. Bryons, Wis. DNR 1974.

Analyses of Thunder Lake Study, Unpublished, Larry Meltby, Russell C. Dunst, and Dr. John G. Konrad, Wis. DNR 1982.

Bogs of Ouetico-Superior Country Tells Its Forest History, Dr. J.E. Potzger, American Association for Advancement of Science.


The Cranberry Plant, Dr. Malcolm N. Dana, the Department of Horticulture, University of Wisconsin-Madison, March 12, 1974.

Cranberry Varieties of North America, Bulletin 513, Experiment Station, College of Agriculture, University of Massachusetts.

Cranberry Weed Control in Wisconsin, by Dr. Malcolm Dana, University of Wisconsin-Madison Extension, A 2226.


Modern Cultural Practice in Cranberry Growing, Sept., 1969, Publication 39, Agriculture Experiment Station, University of Massachusetts, Cooperative Extension Service.


Research Into Action, Publication 45, Cooperative Extension, College of Agriculture, University of Massachusetts.


A Review of Cranberry Weed Control, by Dr. Malcom Dana, Wisconsin Cranberry School, March 13, 1975.


Sprinkler Systems For Cranberry Bogs, Bulletin 532, Experiment Station, College of Agriculture, University of Massachusetts.

A Study of Laws Pertaining to the Culture of Cranberries, by Adolf Kanneberg, Wisconsin Public Service Commission.


Wisconsin Cranberry Lore, by G.C. Klingbiel, University of Wisconsin-Madison Extension, A 2292.
COOPERATIVE AGREEMENT

The State of Wisconsin Department of Natural Resources (DNR) and the Wisconsin Cranberry Growers Association (Growers) find that it is desirable to formalize a cooperative procedure for considering matters of mutual concern, because of an inability to agree on the extent of state regulation of cranberry operations as a result of State v. Zawistowski, 95 Wis.2d 250.

1. To facilitate DNR understanding of cranberry culture, the Growers will appoint one or more persons to assist DNR personnel in understanding the water uses of each class of cranberry growers in the state.

2. DNR and the Growers will designate individuals to serve as liaisons on matters of concern.

3. In the event that concerns arise because of the operation of a specific marsh, the following procedure will be utilized.

   A. When DNR receives a complaint about a cranberry operation, it will contact the grower as soon as possible. The purpose of this contact is to determine what the conditions are and if the matter can be resolved informally. This applies to existing or proposed marshes.

   B. If the matter is not resolved within 5 working days of the contact with the grower, the DNR shall refer it to the Growers' liaison.

   C. The Growers' liaison will review the information provided by DNR. After this review, the grower and complainant will be contacted to determine if there is a basis for resolution. The Growers' liaison shall inform the DNR liaison of the status of the matter within 10 working days after the referral. If the Growers' liaison believes that the matter can be resolved, they will indicate the date of anticipated resolution.

   D. It is understood that at anytime DNR finds that a cranberry operation is causing environmental damage or interfering with public rights and an agreement cannot be reached, it may seek judicial relief.

   E. The Growers' liaison will provide the DNR liaison with a final report of their investigation and resolution within 45 days after referral by the DNR liaison to the Growers' liaison.

   F. If the matter cannot be resolved under this procedure, DNR may seek judicial remedy.

   G. If the matter is resolved or DNR does not act under F., DNR shall make a written record of the disposition of the issues raised under A.

   H. The Growers shall establish a procedure to insure that new owners are informed of any agreements reached with DNR concerning the operation of their cranberry marsh.

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES
Date: January 27, 1982                      By Carroll D. Besadny, Secretary

WISCONSIN CRANBERRY GROWERS' ASSOCIATION
Date: February 18, 1982                     By Charles H. Lewis, President
Attached is the March 1, 1989, Wisconsin Supreme Court decision on the applicability of the financial responsibility requirements of s. 710.11, Stats., and related portions of Ch. 31 to cranberry dams.

The Bureau will be providing guidance after consultation with the Attorney General's Office.
REVIEW of a decision of the Court of Appeals. Reversed.

HEFFERNAN, CHIEF JUSTICE. This is an appeal from a decision of the court of appeals which reversed the circuit court for Adams county, Raymond Gieringer, Judge. We reverse the decision of the court of appeals. This case presents the question of whether cranberry dams in this state are subject to the financial responsibility requirements of sec. 710-11, Stats., and related portions of chapter 31 of the state statutes.

Plaintiffs Jeffrey and Barbara Tenpas are cranberry growers who in July of 1983 bought a cranberry marsh in Adams county. Their land is crossed by Bingham Creek, a navigable stream, and includes two dams across the creek. The dams were built in 1938 for the purpose of cranberry cultivation and have since been used continuously as cranberry dams.

On June 14, 1984, the Wisconsin Department of Natural Resources (DNR) wrote the Tenpases (hereinafter Tenpas) stating that the land they had bought was not properly transferred because Tenpas had no permit for the transfer of the dams as required under sec. 710.11, Stats.[1] The DNR letter suggested that noncompliance with the dam transfer statute clouded the Tenpas title to the land and would make mortgaging difficult.

Under protest, Tenpas applied for and obtained a DNR dam transfer permit. The issued permit identifies the two dams involved as earthen dikes that have concrete water control structures approximately eight feet wide and eight feet tall.

The dam transfer permit issued by the DNR contained several significant conditions which Tenpas was required to accept to receive the permit. First, Tenpas was ordered to complete certain specified repairs to the dams.[2] Tenpas was also ordered to file a $2,500 letter of credit for ten years, the credit amount to be reduced to $1,000 after the specified repairs were completed. Tenpas was ordered to waive any objection to unlimited DNR inspection of the dam. And finally, the DNR permit established a maximum level for the water behind the upper dam. The permit also reserves for the DNR the right to establish by subsequent order a minimum flow of water from the lower dam.

While the permit application was pending, Tenpas began this action asking the circuit court to declare that cranberry growers are not subject to sec. 710.11, Stats. Judge Gieringer decided the matter on summary judgment, finding that DNR regulation of cranberry dams under sec. 710.11, Stats., would impermissibly conflict with rights granted to growers by the cranberry laws, secs. 94.26 to 94-30, Stats., passed in 1867. Tenpas was granted summary judgment declaring his right to be free of the requirements of sec. 710.11, Stats. The DNR appealed.
The court of appeals reversed the judgment, finding that the dam transfer permit requirement of sec. 710-11, Stats., applies to all dams in the state, including cranberry dams; and that the dam transfer permit requirement does not conflict with the scheme set up by the legislature under the cranberry laws. Judge Sundby, dissenting, stated that chapter 31 dam transfer regulations do not apply to cranberry growers. He concluded that the power of cranberry growers to use water and dams for cranberry cultivation has been independently regulated for 120 years by the cranberry laws, without interference by the DNR or its predecessors. Sundby urged that if a legislative act seeks to impose DNR regulation under chapter 31 on the cranberry industry, it must be more adventent than sec. 710.11, Stats.

This case involves application of statutes to undisputed facts. It therefore presents a question of law, a question to be reviewed by this court de novo, without deference to the decisions of the courts below. City of Waukesha v Salbashian, 128 Wis. 2d 334, 347, 382 N.W.2d 52 (1986).

The parties agree that cranberry dam owners were granted certain rights by the legislature in 1867. Presently codified in sec. 94.26 et. seq., Stats., the essential grant of the cranberry laws provides:[3]

"Any person owning lands adapted to the culture of cranberries may build and maintain on any land owned by him such dams upon any watercourse or ditch as shall be necessary…"

The cranberry laws also impose liability for, and provide a procedure for recovering, damages that are caused by cranberry dams. Sections 94.27 to 94-30, Stats., provide a comprehensive scheme for the erection and maintenance of cranberry dams and detailed procedures for arbitration and recovery of damages if injury is occasioned by the failure of a dam. They appear to provide strict liability subject to implementation under special procedures.

The DNR urges that the rights granted by the cranberry laws only narrowly limit their general power to regulate dams under chapter 31 of the statutes. The DNR argues that their regulatory power is displaced by the cranberry laws only with regard to whether, where and for what purpose a cranberry cultivator seeks to build a dam. Tenpas argues, on the other hand, that as cranberry growers the specificity of the cranberry laws exempt them from general DNR regulation of dams under chapters 30 and 31.

The DNR has also urged, and the court of appeals majority generally agreed, that this case should focus on sec. 710.11, Stats. The DNR argues that sec. 710-11, Stats., establishes regulation of financial responsibility for all dams. Recently enacted,[4] it contains no express exception or cross-reference to the cranberry laws. Even if it conflicts with rights granted under the cranberry laws, the DNR urges us to hold that sec. 710-11 supersedes earlier, contrary law.

We conclude, however, that sec. 710.11, Stats., is not amenable to strictly independent interpretation. On its face, sec. 710.11 itself does not define a new or separate wrong. Section 710-11, Stats., provides,

"[a] person may not accept the transfer of the ownership of a specific piece of land on which a dam is physically located unless the person complies with s. 31.14(4)."

The statute merely gives notice of a consequence of failure to comply with sec. 31.14(4), Stats. The legislative note accompanying see. 710-11 states that the purpose of the provision is to: [5]

"... ensure that people working in the real estate profession, including brokers, attorneys and mortgage insurance companies, will be aware of the requirements of sections 31.14(4) and 31.185(1) and (2)…"

At oral argument, counsel for the DNR agreed that sec. 710.11, Stats., is no more than a provision giving notice of some of the requirements of ch. 31. We therefore consider the relevant portions of chapter 31 of the statutes.

Chapter 31 of the statutes is entitled, "Regulation of Dams and Bridges Affecting Navigable Waters." Together with chapter 30 ("Navigable Water, Harbors and Navigation"), it provides a comprehensive scheme for the regulation of Wisconsin's waters, dams and bridges through the use of permits issued by the DNR. The DNR has broad regulatory power under these chapters. For example, sec. 31.02, Stats., empowers the DNR to regulate the level and flow of all navigable water and to determine methods of construction, operation and maintenance of
any dam. The legislative commitment to comprehensive administrative regulation of Wisconsin's water use law under chapters 30 and 31 is longstanding, beginning with the water power acts of 1911, 1913 and 1915. A. Kanneberg, Wisconsin Law of Waters, 1946 Wis. L. Rev. 345, 360.

The specific portion of chapter 31 under which the DNR claims to act in this case is sec. 31.14(4). Section 31.14 regulates dam maintenance by requiring special permits for dam building, improvement or transfer. Section 31.14(2) provides that all dams built or enlarged will be issued permits only after the "applicant furnishes to the department proof of ability to operate and maintain the dam in good condition." Subsection (4) imposes the same financial responsibility requirement whenever the ownership of a dam is transferred. [6]

To determine whether sec. 31.14(4), Stats., applies to cranberry dams, we look to the language of the statute itself. Ball v District No. 4 Area Board, 117 Wis. 2d 529, 539, 345 N.W.2d 389 (1984). Operation of sec. 31.14(4) is triggered by the transfer of the ownership of "a dam." And although we construe sec. 31.14 as a comprehensive statute, the term "dam" is not specifically limited or defined in that section, or elsewhere in the chapter. We might presume that the unqualified term "dam" makes this section applicable to every dam in the state, including cranberry dams.

We do not adopt the construction of sec. 31.14(4) advocated by the DNR because, as we explain more fully below, it would conflict with rights granted growers under the cranberry laws. We will construe statutes, where it is reasonable, so as to avoid conflict with other statutes. State ex rel. McMannan v Thomas, 150 Wis. 1909 196, 136 N.W. 623 (1912). Consequently, we find the most reasonable construction of sec. 31.14(4) provides the DNR with regulatory power over dams generally, with the exception of cranberry dams.

The provisions of secs. 31.14 seem designed to accommodate the regulation of large power dams. Section 31.14(2) speaks of proving financial responsibility for maintenance by establishing special assessment districts. The statute also allows nonmunicipal dam owners to prove financial responsibility by posting bond. Section 31.14(5) provides also that the DNR may require creation of a fund for major repairs or removal of the dam when necessary, but does not apply to dam owners who have the power of eminent domain.

The legislative history of sec. 31.14 suggests that it is intended to regulate power dams, rather than cranberry dams. Section 31.14 was drafted by the Water Resources Committee of the Wisconsin Legislative Council and was enacted into law by 1961 Laws of Wisconsin Chapter 568. Both the minutes of the Committee and the 1959 Joint Resolution of the legislature that prompted the Committee are concerned primarily with the problem of abandonment of large dams by power companies. See Wisconsin Legislative Council Staff Report 61-2, available in Wisconsin Legislative Council and Council Committees, 1959-61 (Legislative Reference Bureau). No mention was made of cranberry dams despite preexisting cranberry dam regulation.

We are aided in the construction of this statute by the history of application of this body of law. Administrative interpretation by the DNR is one avenue of inquiry. State ex rel. Strykowski v Wilkie, 81 Wis. 2d 491, 261 N.W.2d 434 (1978). Tenpas submits that the DNR has heretofore not required cranberry growers to submit to regulation under chapter 31 of the statutes. If the DNR believed they had power to regulate cranberry growers under chapter 31, they have presented no evidence of a prior administrative construction to that effect.

Nine years ago in State v Zawistowski, 95 Wis. 2d 25.0, 290 N.W.2d 303 (1980), this court considered whether DNR water-use permits under sec. 30-18, Stats., are required of cranberry growers. Section 30-18 requires persons who divert water from streams or lakes to obtain a DNR permit. Despite its sweeping and unambiguous language, the court found this permit requirement to conflict with the right to build and maintain dams and ditches granted by the cranberry laws: cranberry dams and ditches are useless if they may not be filled with water. Relying on the rule that the more specific statute prevails, Zawistowski held that cranberry dams are more specifically regulated by the cranberry laws than by the generalized DNR water use regulations of chapter 30.

Although Zawistowski found conflict on general grounds between the cranberry laws and the DNR water-use permit requirement, the DNR urges that the permit requirement in this case would not conflict with rights granted to growers under the cranberry laws. Assurances of financial responsibility, the DNR argues, do not interfere with cranberry growers right to "build and maintain" dams under the cranberry laws. After styling the permit in this case as a limited and modest requirement, the DNR asks that we affirm their permit power on the grounds that it does not conflict with rights granted by the cranberry laws.
We find a conflict. The power to grant or withhold a permit is the power to regulate. Section 31.14 requires dam owners to supply proof to the DNR that they are financially able to maintain dams as specified by the DNR. For non-municipal dam owners, like Tenpas, this reduces to filing a bond in an amount the DNR determines to be sufficient to pay for whatever maintenance it requires. The bond is not imposed as security for damages that might arise from a failure of a dam, but is a means of ensuring that the DNR order of maintenance will be accomplished. However, the power to control cranberry dam maintenance has already been granted to the owners of those dams in sec. 94.26, Stats. The DNR cannot also control the maintenance of those dams without diminishing the previously conferred rights of cranberry dam owners.

Further conflict between see. 31.14(4), Stats., and the cranberry laws becomes apparent from the integrated nature of chapter 31. Section 31.14 is internally integrated and is primarily linked with other parts of chapter 31. Section 31.14(4) operates by requiring compliance with secs. 31.14(2) or (3). These sections, in turn, regulate permits issued under secs. 31.06, 31.08 or 31.13 for the construction, maintenance or enlargement of dams. Section 31.185 is also closely related to sec. 31.14 and requires a permit for alteration or removal of a dam. The integrated nature of dam regulation under chapter 31 suggests the term "dam" used in subsection 31.14(4) be construed in pari materia with its use in other parts of the chapter, thus yielding a consistent whole. State v ILHR Dept., 101 Wis. 2d 396, 403, 304 N.W.2d 758 (1981). The DNR urges that in this case we need not reach the question of the conflict between the cranberry laws and these other provisions of chapter 31. But we see no reason to assume under the basic rationale urged by the DNR that the related sections of chapter 31 will be applied differently. Chapter 31 imposes a panoply of dam regulations which would all apply as logically as sec. 31.14(4) to cranberry dams.

Any doubt that lingers about whether the sec. 31.14(4) dam permit requirement conflicts with rights granted under the cranberry laws can be satisfied by examining the permit issued to the plaintiffs in this case. The permit specifies how Tenpas cranberry dams are to be operated and maintained, expressly ordering a number of repairs to be made as a condition of the permit. The permit also claims power under sec. 31.02, Stats. Counsel for the DNR at oral argument frankly admitted that they do not believe their regulatory power over cranberry growers stops with sec. 31.14(4). This evidence fortifies our conclusion based on the reasoning above that sec. 31.14(4), Stats., conflicts with the cranberry laws.

Consistent with our decision in Zawistowski, we are persuaded that where general DNR dam regulations collide with rights granted by the cranberry laws, the more specific provisions of the cranberry laws apply. The DNR has also argued that the state's paramount interest in protecting public safety supersedes any rights that cranberry growers were granted under the cranberry laws. They argue on the strength of Cranberry Creek Drainage District v Elm Lake Cranberry Company, 170 Wis. 362, 174 N.W. 554 (1920) and Chippewa & Flambeau Imp. Co. v Railroad Comm., 164 Wis. 105, 159 N.W. 739 (1916), that the cranberry laws were long ago superseded by administrative regulation of dams. We find no evidence to support this contention. Certainly this court's decision in Zawistowski stands for a contrary proposition. The fact that the legislature updated the accountability procedure of the cranberry laws under ch. 317, Laws of 1981, confirms the continuing vitality of the cranberry laws as statutes that are to be independently construed.

We do not address the power to impose the strictures of chapters 30 and 31 on cranberry enterprises for it is clear that the legislature has not made that intent evident. Although public safety is a concern of the state, the DNR presents no authority suggesting that the legislature has delegated to the DNR the power to regulate safety hazards created by cranberry dams. In addition to liability arising under the cranberry laws themselves, cranberry dams are still subject to common law tort and property use restrictions. The public is not unprotected.

We hold that the specific legislative treatment of cranberry growers under sec. 94.26, Stats., precludes application of the general financial responsibility requirements of secs. 710.11 and 31.14(4), Stats., to cranberry dams. Because we conclude that secs. 710.11 and 31.14, Stats., do not apply to cranberry dams, we reverse the decision of the court of appeals and reinstate the declaratory judgment of the trial court.

By the Court: Decision reversed.

[1] Section 710.11, Stats., provides:

Transfer of land where dam exists.
A person may not accept transfer of the ownership of a specific piece of land on which a dam is physically located unless the person complies with s. 31.14(4).

[2] Finding No. 6 of the permit issued to the Tenpases specifies repair of cracks in the concrete wingwalls and spillways of each dam; replacement of missing concrete in an emergency spillway; and removing woody vegetation from the dikes. Order No. 7 of the permit makes performance of these repairs a condition of acceptance.

[3] Section 94.26, Stats., reads in full:

**Cranberry culture; maintenance of dams, etc.**

Any person owning lands adapted to the culture of cranberries may build and maintain on any land owned by him such dams upon any watercourse or ditch as shall be necessary for the purpose of flowing such lands, and construct and keep open upon, across and through any lands such drains and ditches as shall be necessary for the purpose of bringing and flooding or draining and carrying off the water from such cranberry growing lands, or for the purpose of irrigation, fertilization and drainage of any other lands owned by such person; provided, that no such dams or ditches shall injure any other dams or ditches theretofore lawfully constructed and maintained for a like purpose by any other person.

[4] Section 710.11, Stats., was introduced to the legislature at the request of the DNR by the Law Revision Committee. It was enacted by Chapter 246 of the Laws of 1981, effective April 27, 1981.

[5] The legislative note to see. 710.11, Stats., reads in full:

"The creation of section 710.11 of the statutes should ensure that people working in the real estate profession, including brokers, attorneys and mortgage insurance companies, will be aware of the requirements of sections 31.14(4) and 31.185(l) and (2) of the statutes. This new awareness should enable the department of natural resources to maintain accurate records regarding dam ownership and improve the administration of its dam safety program."

[6] Section 31-14, Stats. (1985-1986) provides in full:

**31.14 Proof of ability to maintain dams required.** (1) It is the policy of this section to preserve public rights in navigable waters, including those created by dams, and to provide a means of maintaining dams and the developments which have been made adjacent to the flowage of such dams.

(2) Except as provided in sub. (3), a permit shall not be granted under s. 31.06, 31.08 or 31.13:

(a) Unless the applicant furnishes to the department proof of ability to operate and maintain the dam in good condition, either by the creation of a special assessment district under ss. 31.38 and 66.60, or by any other means which in the department's judgment will give reasonable assurance that the dam will be maintained for a reasonable period of time not less than 10 years; or

(b) If a majority of the municipalities in which 51% or more of the dam or flowage is or will be located files with the department, prior to the granting of the permit, their objections to the granting of such permit in the form of resolutions duly adopted by the governing bodies of such municipalities.

(3) Subsection (2) does not apply if the applicant complies with each of the following requirements:

(a) Furnishes proof satisfactory to the department that he owns or has an enforceable option to purchase all the land which is or will be flowed by the impoundment, together with the shore line and an immediately adjacent strip of land at least 60 feet in width, but the department may in a particular case permit a narrower strip where the 60-foot minimum is impractical and may, in furtherance of the policy stated in sub. (1), require ownership of a wider strip.

(b) Files with the department a writing in such form as the department requires in which he agrees that following the initial filling of the proposed pond he will not convey the dam to another without
first obtaining department approval. The department may require from an applicant who does not have the power of eminent domain a bond or other reasonable assurances that he will adhere to such agreement.

(c) Furnishes proof satisfactory to the department that he has dedicated or will dedicate a parcel of land for public access to the impounded waters.

(4) No person may assume ownership of a dam after October 21, 1961, or the ownership of that specific piece of land on which a dam is physically located after April 27, 1982, without first complying with sub. (2) or (3). The transfer of the ownership of a dam or the ownership of a specific piece of land on which a dam is physically located made without complying with sub. (2) or (3) is void unless a permit to abandon the dam was granted under s. 31.185 or unless the transfer occurred by operation of law. Every person who accepts ownership by operation of law is subject to this chapter.

(5) For the purpose of implementing the policy stated in sub. (1), the department may by rule require all or specified classes of persons operating a dam for profit to create a fund or reserve to be used for major repairs, reconstruction or removal of the dam when necessary. Such rules shall prescribe the manner in which such fund or reserve is to be created, maintained and expended. This subsection shall not apply to a person who has the power of eminent domain.
The purpose of this guidance is to clarify the scope of the practicable alternatives analysis for proposed activities authorized by the Department of the Army Permit GP-014-WI, "Cranberry Marsh Operations Established Prior to 30 June 1994",

This general permit was negotiated with the Corps of Engineers and the cranberry industry to provide a streamlined permit process for specific cranberry operation activities on cranberry marshes that were established prior to June 30, 1994 while providing opportunities to assess the proposed site for potential significant adverse impacts.

The negotiated general permit relates to specific activities associated with established cranberry operations. These activities are (1) expansion of existing cranberry beds, (2) "squaring-off" of existing cranberry beds, (3) construction of new cranberry beds adjacent to existing beds, (4) rehabilitation of abandoned beds (clearing, leveling, etc.) that does not fall under the 404(f) exemption of the Clean Water Act, (5) construction of a dike for subdivision of an existing reservoir that does not fall under the 404(f) exemption of the Clean Water Act, and (6) construction/extension of dikes for reservoir expansion. Use of the general permit is limited to a maximum of 10 acres of disturbance per operation every five years.

While the general permit and state water quality certification requirements still require analysis of the proposed activity following the "avoid and minimize sequence", it was recognized that the permit authorizes only the specific activities described above at existing, established and operating cranberry marshes. Therefore, it was the agency's intent that the alternative (avoidance) analysis for proposed activities authorized by GP-014-WI be limited exclusively to consideration of on-site alternatives.

However, it was also recognized that some cranberry growers operate multiple sites and doing the proposed activity at one site opposed to another could result in less adverse impacts while still meeting the desires and needs of the grower.

Thus the permit requires growers who own or operate more than one cranberry site to describe alternatives to the proposed activity that were considered and explain why they were not chosen, including why the other site(s) were not considered.

Recently questions have been raised whether this requirement includes cranberry sites or operations owned by relatives, minority share holders, stockholders, etc. This requirement was intended and should
be administered to include only those operations or sites under the direct ownership or control of the applicant.

In summary, the alternatives (avoidance) analysis for proposed activities authorized by Corps of Engineers General Permit GP-014-WI should be limited to a consideration of on-site alternatives at the project site or in the case of multiple site ownership or operation, to all available sites.

Approved:

George E. Meyer, Secretary
DATE: December 29, 1998

TO: Regional Directors

INSERT: Chapter 180, Water Reg. Guidebook

FROM: Scott Hausmann – FH/6

DISTRIBUTION: All Holders

SUBJECT: Practicable Alternatives Analysis Requirements for Proposed Expansions of Existing Cranberry Operations in Section NR 103.08(4)(c). (For COE Individual permit applications not made under General Permit 014-W1)

**Issue:**
The purpose of this guidance is to clarify the scope of the practicable alternatives analysis for expansions of existing cranberry operations. This guidance is made pursuant to revisions to NR 103 effective June 1, 1998, and applies to water quality certification decisions for all US Army Corps of Engineers individual permit applications for existing cranberry operations other than those made under General Permit 014. (See November 6, 1998 Staff Guidance applicable to GP 014).

**What Is An Existing Cranberry Operation?**
An "existing cranberry operation" under NR 103.08(4)(c) means a cranberry operation that was established prior to June 1, 1998. The practicable alternatives analysis made pursuant to a water quality certification decision for a new cranberry marsh is not affected by this staff guidance. Any expansions of cranberry operations which were established after June 1, 1998 will be required to consider the full range of alternatives in their alternatives analysis.

**What Are Expansion Activities?**
The revision to NR 103 relates to specific "expansion activities" associated with established cranberry operations. These "expansion activities" are (1) expansion of existing cranberry beds, (2) "squaring-off" of existing cranberry beds, (3) construction of new cranberry beds adjacent to existing beds, (4) rehabilitation of abandoned beds, (5) construction of dikes for subdivision of an existing reservoir, and (6) construction or extension of dikes for reservoir expansion.

**What Are The Limits On Practicable Alternatives Analysis For Expansions of Existing Operations?**
The rule revision and state water quality certification requirements still require analysis of the proposed activity following the "avoid and minimize sequence". Nonetheless, the rule revision limits the extent to which the applicant must search for alternatives.

For water quality certification decisions related to expansion activities, the applicant's search for practicable alternatives is limited to practicable alternatives located within the boundaries of the
existing operation and property adjacent to the location of the proposed expansion. If adjacent property is not available for purchase or if it is available for an unreasonable cost, then it cannot be considered a practicable alternative. Adjacent properties that are not presently owned by the applicant but which could reasonably be obtained, utilized, expanded or managed for the expansion of the existing operation constitute may be considered as practicable alternatives.

**Functional Values Analysis**
If an applicant has shown that he has avoided and minimized wetland impacts to the greatest extent practicable and the Department determines that there are no alternatives that would avoid wetland impacts, the Department must make a determination on the significance of the project's impacts on the functional values of the affected wetland. Regardless of whether alternatives are available, if a proposed expansion would result in significant adverse impacts to the affected wetland, the standards in NR 103 are not met and water quality certification must be denied. If no practicable alternative is available and the proposal will not result in significant adverse impacts to the affected wetland, then the standards in NR 103 are met and water quality certification should be granted.

Approved: George E. Meyer, Secretary
GUIDANCE PURPOSE AND DISCLAIMER

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INTRODUCTION

What are floating bogs? Why are we concerned with them?

A "floating bog" is a mass of aquatic vegetation not firmly rooted to the lakebed. Because they are not firmly rooted, floating bogs rise and fall with variations in lake level. They may move dramatically during storms or after ice breakup. Floating bogs several acres in size are not uncommon. They may be driven across a lake simply by wind pressure against standing trees. Floating bogs are typically the most trouble on raised lakes. In the famous Lake Chetek case, a bog of about 10 acres was pushed across Lake Chetek, and had to be removed by the National Guard. These bogs may cause serious injury to persons, property, or structures.

We are mainly concerned with "problem" bogs. A variety of statutes and administrative rules indirectly regulate floating bogs. The major problem with regulating floating bogs is that ownership of the bogs has never been legally established so liability for bog-related problems can rarely be established.

FORMATION OF FLOATING BOGS

Floating bogs are natural phenomena of many acid marshes in northern and eastern Wisconsin. Floating bogs are occasionally found in southeastern Wisconsin, although they are far more common in the north.

Floating bogs follow a typical bog pattern of succession, from a mass of grasses, reed and leatherleaf to an intermediate tamarack type swamp, to a cedar, swamp maple and pine climax bog. At some point, the floating bog may gain status as land and becomes the property of the adjoining riparian. The point where the bog becomes land is difficult to determine, requiring biological and physical field observations.
Another type of floating bog results from the flowage of lands which include wetland cattails or similar bogs. Soils associated with this complex are often buoyant. The root mat is often interlaced to the point that large sections of this type of bog can rise up and float in a new impoundment (e.g. Day Lake, Ashland County). Sections of lake-edge bog also are often torn loose by wave action or ice action (e.g. Lake Poygan, Winnebago County).

EVOLUTION OF LAW AND REGULATIONS

Two Supreme Court cases express the current state of the law on floating bogs. In Attorney General ex rel. Becker v. Bay Boom Wild Rice and Fur Company, 172 Wis. 363 (1920), the Supreme Court defined floating bog. State v. Lamping, 36 Wis. 2nd 328 (1967) refined the definition to the following:

". . . In fact, however, floating bog is a mass of grass, reeds, and other aquatic vegetation which grows and floats on the surface of water in warm weather, which may become frozen into the ice during the winter, and upon the recurrence of high stages of water is carried on its surface, is broken off, and may be moved by the winds and currents to deep waters, where it is ground to shreds and disappears as sediment on the bed of the water. When it so floats and before it is so destroyed and deposited on the water bed, it is in no sense soil or land. Wherever it forms in the summer season it indicates that there is a substantial amount of water between it and the soil forming the bed of the water . . ."

The Department interpretation of its responsibility under the statutes is found in two documents. An October 29, 1968, legal opinion established:

1. The opinion of Department experts can determine whether a mass of vegetation is a floating bog or not.
2. Ownership of a bog is uncertain while the bog is floating.
3. Once a bog becomes solid land, the riparian whose land it adjoins owns it.
4. If a bog is floating, it may be removed without a permit provided no bottom material is removed.
5. If a bog has become land, a 30.20 permit is required before it can be removed.

In a January 5, 1973, memorandum, several more points on floating bogs were made:

1. When removing a floating bog, all debris must be removed (30.125, Stats.). There must be adequate Department supervision during removal.
2. The bog may not be sunk with stone or any other material.

Subsequent opinions have reiterated the points established above.

APPLICABLE STATUTES

No statutes directly regulate activities involving floating bogs. The following statutes indirectly regulate activities which may involve floating bogs;
Endangered Species.  Section 29.415, Stats., refers to endangered species lists and would prohibit the removal of a floating bog if it harbors species on the endangered species list.

Weed Cutting.  Section 29.545, Stats., prohibits the cutting and harvesting of aquatic plants from certain specified bodies of water, without authorization from the Department.

Protected Plants.  Section 29.546, Stats., refers to a variety of plants which, if found on the bog, would require authorization from the Department for removal.

Weed Control.  Section 30.125, Stats., governs weed control in navigable waters.  All weeds cut in navigable waters must be removed.  Any person removing a portion of a bog must remove all bog material from the lake.

Temporary Booms.  Section 30.15, Stats., allows for the placement of a temporary boom for the cutting of weeds obstructing navigation, provided Department consent is obtained.

Dredging.  Section 30.20 allows dredging of a lake or stream, either by contract with the state or by permit.

APPLICABLE ADMINISTRATIVE RULES

Wetlands.  NR 1.95, Wis. Admin. Code, establishes general standards to be applied by the Department in decisions affecting wetlands.

Shoreland Areas.  NR 115, Wis. Admin. Code, establishes administrative standards to be followed by counties in their administration of shoreland zoning ordinances.

Dredging.  NR 346, Wis. Admin. Code, specifies contract requirements for dredging of natural lakes and NR 347, which controls hydraulic dredging of watercourses.

LIST OF REGULATIONS

a.  Statutes:  29.415, 29.545, 29.546, 30.125, 30.15, 30.20

b.  Administrative Rules:  NR 1.95, NR 115, NR 346, NR 347

c.  Manual Codes:  None

d.  Court Cases:
   2.  State v. Lamping, 36 Wis. 2d 32P (1967)
DATE: January 30, 1989

TO: Matt Weidensee - SED

FROM: Dale Simon - WZ

SUBJECT: Ownership and Jurisdiction of Floating Bogs, Lake Nagawicka Waukesha County

Your January 13, 1989, memo to Ken Johnson raises four (4) basic questions regarding bogs. Hopefully, the following responses, which were also conveyed to Kathi Kramasz via telephone conversation on January 27, 1989, will adequately answer your questions.

1. Wasn't the floating bog a natural feature prior to the construction of the dam? Yes. Bogs generally take hundreds of years to develop. The raising of the lake level, after the construction of the dam, may have caused a bog that was once attached to the bed of the original lake to dislodge itself and become a floating mat of vegetation.

2. Considering that the dam construction may have raised water levels in the lake area, who owns the new lake bed in the area of the bog? I have to assume that the floating bog is located above that portion of the lake bed that was flowed as a result of the dam. Ownership of that portion of the lake bed that is flowed as a result of the dam is contingent upon the legal arrangements that were made by the dam owner when the dam was being constructed. Generally, ownership of the land that was flowed could either be in fee title by the dam owner or still owned by the adjacent riparian if the dam owner only obtained flowage easements. None the less, the original lakebed to the ordinary high water mark would be under state ownership. How you determine that specific area can be extremely difficult.

3. A preliminary field investigation was performed to determine the OHWM in the kettle area. What portions of the bog are below the OHWM? If the bog was floating then the entire bog is below the OHWM, therefore your determination is correct. Sometimes, you can have a situation where a bog can be located above the OHWM of a lake. These situations are for the most part rare and occur when groundwater discharges on an upland slope. As I understand your situation, this is not the case.

4. Is it possible for the riparian property owner to own a floating bog if they do not own the bed below the bog? No. The bog would in all likelihood be considered a floating mat of vegetation and considered a part of the water itself. Please refer to Chapter 190 of the Water Regulation Handbook for more information.

If you have any questions about the above or any other Chapter 30 or 31 related issues please contact me.

cc: Gary Nelson - SED
    Bob Roden, Ken Johnson, Scott Hausmann - WZ
GUIDANCE PURPOSE AND DISCLAIMER

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DATE: May 12, 2005

TO: Water Management Specialists
   Water Management Engineers
   Regional Aquatic Habitat Experts
   Bureau of Wildlife Management

FROM: Michael Staggs, FH/4


This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

Purpose of this Guidance
This guidance applies to all wetland conservation projects qualifying for a general permit under chapters NR 353 and 343, Wisconsin Administrative Code. This guidance also applies to projects conducted under the Memorandum of Agreement with the U.S. Fish and Wildlife Service and the Natural Resources Conservation Service.

Qualifying for a conservation project permit
To qualify for a general permit the basic purpose of the proposed project must be wetland conservation - the restoration, enhancement, preservation or management of wetlands.

Ch. NR 353 does not authorize a project whose basic purpose is not wetland conservation, such as a driveway through a wetland, even if the project will result in wetland creation or enhancement. For example, the construction of a detention basin in wetlands for stormwater management would not qualify for the general permit, even if the detention basin or the project of which the basin is a part will also result in habitat creation or enhancement. Similarly, a general permit could not be used to authorize a flood control project that may also result in creation or enhancement of some wetland habitat.

Other main factors to consider in deciding whether a project qualifies include:
1. Whether the project site is degraded
2. Whether the project is confined to non-navigable waters or waters that are navigable-in-fact without stream history
3. Whether the project includes activities beyond those listed in section NR 353.05.
All the requirements to qualify for a general permit are listed in sections NR 353 and on the general permit application form.

**Compliance with Water Quality Certification Requirements**

As part of the rule making process a water quality certification was issued for projects meeting the requirements of ch. NR 353, therefore an individual water quality certification is not required. However, an individual water certification can be required if felt warranted. Existing procedures for “recapture” should be followed when elevated to an individual certification to assure consistency with this approach.

The use of fill to construct berms, dikes, ditch plugs etc. was considered and analyzed in the development of ch. NR 353. If a project qualifies for a permit pursuant to ch. NR 353, then fill for these structures is authorized and a practical alternative analysis (PAA) is not required.

**Spreading of excavated or fill material**

*During rule development, discussions of allowed activities, included removing undesirable invasive species and leaving some of that vegetation in the wetland provided one buried only an equally undesirable plant community and one did not reduce the wetland area. For example. One could place reed canary grass and its root mass on top of an existing reed canary grass monoculture, but not over a wet meadow community with more diversity.*

The "vegetation fill" is mostly organic matter (8-12 inches of dense roots and some soil) and so a 1:1 or 2:1 scrape to fill ratio typically retains wetland hydrology conditions throughout the site, especially where one also disables drains. The purpose of allowing "vegetation fill" is to make plant community restoration, as well as hydrologic restoration possible. Restoring a native herbaceous plant community in a reed canary grass monoculture requires removing reed canary grass sod. Some might be used as ditch fill material or bulldozed to adjacent non-wetland, but this usually uncovers only a small portion of the site. Unless one can haul more material away (seldom possible) or leave some in the wetland, introducing or managing for native herbaceous species is futile. The effect of not allowing "vegetation fill" is to discourage attempts to restore herbaceous native plant communities.

Thus the spreading of excavated or vegetative fill material on a wetland project site can be authorized by ch. NR 353.

**Compliance with Environmental Analysis and Review Requirements**

Except in non-federal wetlands all ch. NR 353 actions are a type 4 action and a public notice or press release is not required. In non-federal wetlands, Ch. NR 353 actions require a public notice or press release.

**Application**

**MOA:** Representative of the federal agency should fill out front of the general permit form and supply self-certification checklist. Landowner’s signatures are not required. Restorationists should do state and federal endangered and threatened and cultural resources reviews as far as possible with the publicly available data.

**Public:** All other applicants should follow all directions on the general permit form (submit plans and narrative that demonstrates the project is wetland conservation as specified on form). If there is no berm or dike being proposed, the agent may sign for or in lieu of the landowner.
Fish entrapment
Under NR 353, the possibility of fish entrapment is a tolerated impact in exchange for the benefits of
wetland conservation. Interference with fish passage is a specific concern listed in s. NR 353 and must be
analyzed when it may occur.

Cold water resources
In general, the impact of wetland conservation projects adjacent to cold water streams is only an issue if
excavation will significantly interrupt groundwater flow.

Seeding
NR 353 language regarding non-native or invasive species refers to "planned introduction" of these
species. Annual cover crops do not constitute planned introduction. The use of a mixture of fast-
germinating annual cover crop species (annual oats or rye) together with appropriate native species is
recommended, but not required, in most wetland conservation activities.

Riprap
Any riprap approved or required for the proposed project should meet NRCS Standard 410. These
standards are more flexible than the Department standard for basic shore stabilization because the
hydraulics and hydrology are different.

Process
MOA - It is recommended that new or inexperienced field staff should initially conduct on-site meetings.
After experience is gained it is appropriate to conduct in office reviews with site visits only on complex
projects. It is also recommended that in-office meetings be held on likely upcoming projects.

Time Limits
From the date of receipt of a complete application, there is a 30-day presumptive approval for projects
that comply with ch. NR 353 provisions.

Local Permits
Projects still need local permits. Members of the Department Wetland Team, in cooperation with
SEWRPC and the U.S. Fish and Wildlife Service are developing a list of wetland restoration projects that
typically cause no adverse floodplain effects and as well as model ordinance language for county
floodplain ordinances.
DATE: August 4, 2005

TO: Water Management Specialists
Water Management Engineers
Regional Aquatic Habitat Experts
Wetland Team
Rivers and Habitat Protection Section
Lakes and Wetlands Section

FROM: Todd Ambs, Administrator
Water Division

SUBJECT: Guidance on Reviewing Wetland Compensatory Mitigation Proposals in Wetland Permitting

1999 Wisconsin Act 147 was signed into law in May 2000 and gave the department authority to consider wetland compensatory mitigation in wetland permitting or approval decisions. On February 1, 2002, revisions to NR 103, WI Admin. Code and the new Chapter 350, WI Admin. Code, went into effect. The legislation authorizing the wetland compensatory mitigation program, 1999 Wisconsin Act 147, and the administrative codes, NR 103 and NR 350, are available at www.legis.state.wi.us. The Guidelines for Wetland Compensatory Mitigation in Wisconsin is available at http://www.dnr.state.wi.us/org/es/science/publications/wetland_mitig.pdf.

The basic concepts that all staff should be communicating to applicants:

- Compensatory Mitigation involves wetland restoration or creation to “compensate” for wetland loss either through mitigation projects completed by the applicant or through the use of pre-approved “banks” in business to provide a mitigation service to applicants.
- Applicants must show that they have met the Practicable Alternatives Analysis to avoid and minimize wetland impacts (see Understanding the NR 103 Decision Process, February 2002).
  - Mitigation may be considered concurrently with avoid and minimize alternatives when wetland impacts are less than 0.1 acres; less than 1 acre, outside the 100-year floodplain, and not on certain types.
  - For all other projects, mitigation may be considered only after the applicant has met the Practicable Alternatives Analysis.
  - Mitigation may not be considered in decisions for cranberry operations or impacts to wetlands in an Area of Special Natural Resource Interest.
- Mitigation is voluntary and not a department requirement.
- When compensatory mitigation is part of an application, the applicant will need to follow detailed rules, requirements and review process for the mitigation project (NR 350 and the Guidelines) that have been established to assure that these projects are carried out in a manner that has a high likelihood for success.

The roles of the water management specialist (WMS), or other permit reviewer, and wetland restoration ecologist (WRE) in the compensatory mitigation projects are:
The WMS will remain the initial point of contact on projects that may impact waterways or wetlands. The WMS will determine compliance with NR 103 and if compensatory mitigation should be considered as part of the NR 103 evaluation.

When compensatory mitigation is being considered in a permit evaluation, the WMS should assume that the compensatory mitigation project will meet all rules and requirements and will be carried out in a manner that has a high likelihood for success.

The WRE will be responsible for assuring that mitigation projects are in compliance with NR 350. The WRE will evaluate and work with the applicant to approve and monitor the actual compensatory mitigation project. Only the WRE has authority to approve mitigation projects that are a condition of water quality certification.

Successful implementation of this new program will demand effective communication between the Water Management Specialist and the Wetland Restoration Ecologist. Actual steps the Water Management Specialist and Wetland Restoration Ecologist should complete with each new application that includes an offer of compensatory mitigation are:

**Pre-Application Conference or Initial Contact**

**Applicant:**
- Should be able to describe the project, including the location and the estimated acreage of wetlands impacted and alternatives considered.

**WMS:**
- Determine which column of the [Wetland Mitigation Process Table](#) applies. If the proposed project can meet permitting or water quality certification standards without compensatory mitigation, proceed with the normal water quality certification process.

- If compensatory mitigation can be considered, direct the applicant to compensatory mitigation guidance material available on the [mitigation website](#). Provide applicant with [bank information](#) if they are interested in that alternative.

- Discuss and agree with applicant the scope of alternative analysis required pursuant to NR 103.

- Give the applicant a “preliminary analysis of the potential for compliance with” NR 103. [NR 103.08(1)].

- Inform applicant that offering compensatory mitigation does not mean that the proposed project or compensatory mitigation will be approved.

**Application Receipt**

**WMS:**

Review application for completeness; include “mitigation plan meeting state standards” as a needed item in request for information/completeness determination.

Send mitigation materials to wetland restoration ecologist. Send a start review memo, copy of application materials and the mitigation materials to Pat Trochlell, FH/4 or Julia Wilcox, FH/4.

Inform applicant of whom to contact with questions – the WMS for development project, the WRE for compensation mitigation.

WRE:
- Send a letter to the applicant introducing the mitigation process and elements needed for a complete application.
- Review mitigation plans for completeness pursuant to NR 350. Determine if compensation should be met on-site or at a mitigation bank.
- Determine if any permit will be required for the mitigation project itself. If so, contact WMS immediately and discuss.
- Coordinate with the Corps of Engineers on mitigation requirements.

Application Processing

WMS:
- Evaluate application per NR 103 category. The WMS is responsible to make the water quality certification decision including evaluating the project’s practical alternative analysis and assessing functions and values.
- Inform WRE of preliminary decision, especially if a decision is reached that the permit will be denied or that approval can be issued without compensatory mitigation.

WRE:
- Evaluate the compensatory mitigation relative to probability of success for providing functional values.
- Inform WMS and applicant of any deficiencies in the mitigation plan and whether the mitigation plan can be approved when any identified problems are fixed. If an on-site mitigation plan can be approved, tell the applicant to send the conservation easement and financial assurances to the WRE. If a mitigation bank purchase is approved, tell the applicant to send the affidavit of bank credit purchase to the WRE.
Inform the WMS when the conservation easement and financial assurances or the affidavit of bank credit purchase have been received. Route the financial assurances to the Secretary for signature.

Prepare wetland mitigation summary sheets for the file and inform the WMS of any special conditions needed for the permit/approval. Inquire if the WMS would like copies of any of the finalized mitigation documents.

Inform the WMS, in writing, that the applicant has met all requirements of NR 350.

WMS:

- Issue permit with compensatory mitigation condition, citing final version of mitigation plan if an on-site plan was approved and any other special conditions. Send copy of permit to WRE.

On-site Mitigation Compliance

WRE:

- After permit has been issued, send conservation easement to Bureau of Facilities and Land. Keep financial assurances in a secure location.
- Maintain contact with consultants to monitor progress of mitigation project. Keep WMS informed of progress.
- Receive and review as-built report. Conduct site inspection. Recommend corrective actions if needed. If site has met construction goals, release construction financial assurances.
- Receive and review monitoring reports. After receipt of final monitoring report, conduct the final site inspection. Recommend corrective actions if needed. If site has met all performance standards, approve site and release remaining financial assurances.
- Inform WMS if significant non-compliance issue develops.

WMS:

- If mitigation documents (such as financial assurances or monitoring reports) are mistakenly sent to the WMS, forward all documents to the WRE.

Enforcement

WRE:

- Schedule an enforcement conference. Inform owners that the DNR will be pursuing access to the financial assurance funds if they choose not to address the site problems.

WMS:

- Assist WRE with enforcement actions if necessary.
Questions on specific mitigation projects should be directed to Pat Trochlell or Julia Wilcox.

*Drafted by P. Scott Hausman, revised by Julia Wilcox and Pat Trochlell.*

*Approved: Aquatic Habitat Coordinators*

Approved: [Signature] on 8-1-05  
Mary Ellen Vollbrecht, Section Chief  Date

Approved: [Signature] on 8-1-05  
Todd Ambs, Administrator  Date