

DATE: November 20, 2012
TO: Water Regulation Staff
FROM: Pam Biersach – Director, Bureau of Watershed Management
SUBJECT: Program Guidance 3500-2012

Unauthorized Dams November 2012

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Purpose: In the course of carrying out regulatory responsibility with dams, we find structures acting as dams that do not have clearly defined authorization. The structures may be large or small dams on navigable or non-navigable watercourses. Some people will view the presence of these dams as beneficial, especially those who are riparian owners on the pond or use the impoundment for recreation or livelihood. The presence of these dams may pose a threat to life or property, impinge on or take private property rights, or cause various degrees of environmental harm. Because of these potential threats, Chapter 31 requires that a dam have a responsible owner to operate and maintain the structure, and be authorized by a permit, order or appropriate approval.

The purpose of this document is to provide guidance to staff for consistently identifying and documenting these structures, and then resolving the lack of clear authorization. Each occurrence of unauthorized dams will be evaluated on a case-by-case basis, but this guidance is intended to allow waterway staff to make consistent decisions. The same procedures will be used for dealing with dam-like structures without clear authorization on Department-owned lands.

Factors to Guide Consideration: The following triggers are prioritized to guide staff on how and when to address unauthorized dams. The factors are prioritized in order of immediacy.

1. Failure or imminent failure of the structure.
2. Impacts on a significant resource (threatened or endangered species, significant water quality impact, etc.).
3. Proposed development in the downstream area (approximate hydraulic shadow).
4. Property transfer of parcel on which the dam structure is located.
5. Plans submitted to repair/replace the dam.
6. Complaint (usually water levels or flows).
7. 31.19(2) inspection (checking for authorization should be part of every 31.19(2) inspection).
8. Active stream restoration project.
9. Program integrity (internal discussion with supervisor and other affected programs).

Immediate Course of Action: When a structure in a stream is under threat for failure, we need to deal with it immediately, whether it is properly authorized or not, to reduce the potential for loss of life, or damage to property or the environment. In these cases, the dam safety engineer and/or other staff must work with the owner to minimize or eliminate the potential for failure, coordinate with county or other emergency management staff to protect areas downstream, and set aside the discussion about authorization until the emergency is over. The procedures to follow are the same as for authorized dams, spelled out in the Standard Operating Procedures for Dam Failure Emergencies in MC 3561.2.

If the dam is not imminently failing, investigation into the proper authorization can take place prior to any written or oral communication with the owner of the property on which the structure is located.

When department staff becomes aware of an apparently unauthorized dam (usually through one of the guiding factors above), the WME should coordinate with the appropriate WMS, using the following process.

1. Perform a thorough search in the dam inventory, waterway permits database, field file or other on-site documents
2. Notify immediate supervisor and the state dam safety engineer.
3. Notify property owner by phone, identifying the potential problem. Follow up by letter describing and documenting the apparent problem and encouraging the owner to research their documentation to show authority.
4. Determine if site visit is warranted (if it is, complete steps –5 and 6 otherwise proceed to step 8)
 - A. Mandatory site visit
 - i. Known safety or environmental concern, indications of imminent failure
 - ii. Complaint received from public that indicates a possible safety concern
 - B. Optional site visit
 - i. Not enough information to determine safety of structure without a site visit and dam and/or impoundment is large based on map survey/air photos/information from complainant or other department staff
 - ii. Lake level complaint
 - C. Site visit not warranted
 - i. Warden or other knowledgeable staff have visited site and documented conditions
 - ii. Owner agrees to immediate removal (for a structure that would be classified as a small dam). WME or WMS will need to follow up to validate compliance.
5. If site visit is warranted, notify warden, if necessary, for safety or required regional procedures.
6. Obtain permission from the property owner to access the site, with the property owner present (if possible). As these situations may become contentious it is often beneficial to have more than one staff person attend this first visit. For situations that are anticipated to be contentious, a warden should be present at this investigation. If the property owner refuses access to the site, staff will need to work with the local warden to obtain an inspection warrant.
7. Conduct site visit. If there is a verified impending danger to life or property the WME should orally order an immediate drawdown of the impoundment behind the structure. If an oral order is issued it must be followed by a written order under 31.19(5) within one week of the site visit (see Manual Code 3561.2). Make structural height determination. A storage capacity estimate must be performed in the office to determine NR333 size classification
8. Document the size and condition of the dam through photographs and detailed notes, estimating the height and size of impoundment for future database recording.

Follow up actions: In general, both the WMS and WME will be significantly involved in the resolution of the unauthorized structure.

1. Investigate potential authorization.

- A. Determine whether the structure was ever given appropriate authorization by an applicable State agency. Some places to look for appropriate authorization are:
- i. On the authorization sheet near the beginning of the field file, if one has been developed.
 - ii. In the waterway and wetland permit database.
 - iii. In the dam database on the regulatory page or in the approval sub-page.
 - iv. In the old central office card files (request can be made to central office for help searching this resource) and microfilm to look for any record of authorization, such as permits, orders or approvals, or communication about the structure or previously actions by the department or its predecessors.

These steps should have been adequately completed as part of the initial site investigation.

- B. If some authorization is found, this should be documented in the field file, in the authorization field of the regulation page in the database, in the authorization approval description field on the regulatory page of the database, and in the approval subpage in the database (if appropriate).
- C. Some structures, while never clearly authorized, have been on the landscape long enough that the department or its predecessor agencies may have taken prior actions that would constitute authorization. This authorization is usually evidenced by some formal action with appeal rights on the structure that would recognize it as a dam, such as a transfer or formal order or plan approval, or the existence of a numbered field file and inspection report with directives. We will consider the structure is authorized as a dam (for structures on watercourses at that are considered navigable and non-navigable by current standards) if any of the following apply:
- i. Formal action has been taken – an order or permit with appeal rights has been issued for a transfer, drawdown or plan approval for reconstruction or significant repairs.
 - ii. A field file has been developed with a distinct field file number assigned and inspections have been completed for the dam with directives issued to the owner.
 - iii. The structure was built on a watercourse that was considered non-navigable at the time of construction (after 1945 and prior to 1974) and the structure was designed by a professional engineer registered in the State of Wisconsin or SCS/NRCS engineer unless the dam was not constructed according to the design plans.

If authorization is not found, it is necessary to determine if authorization/approval was required at the time the structure was built. Chapter 140 of the Water Regulation Handbook has information on the dam authorization process. Dates key to authorization requirements are contained in the timeline in Appendix 1.

- D. If the timeline search shows the dam did not need authorization and we have a responsible owner, this should be documented in the file and database. The owner should be notified in writing of our conclusion and given information on responsibilities of owning a dam.
- E. The size, location and other pertinent information about the dam should be entered into the dam database using unauthorized or authorization unclear in the status field. A synopsis of the situation should be entered into the comment section (see tracking the structures) and if appropriate, entered as an incident under the incident tab. As much of the other information as possible should also be entered into the appropriate fields. Refer to MC 3561.2 for timeframes.

- 2. Written notification to owner of options:** If upon investigation, the structure does not pose an immediate danger, the property owner should be informed in writing of our findings,

including whether we believe the structure on their property to be unauthorized and the options the owner has for his/her dam. This is a critical step as it places the property owner on notice that a problem exists, and action by the property owner is required. It also allows the property owner an opportunity to produce evidence that the structure is, in fact, properly and clearly authorized.

If the research shows the structure should have been formally authorized and was not, the owner has two options: Apply to authorize, or remove the structure.

- A. Apply for after-the-fact authorization with the appropriate after-the-fact permit fee. The authorization must require that the owner meet the requirements of any other new dam and be held to the same technical, environmental and safety standards. The after-the-fact dam plans (including stability analysis and hydrologic and hydraulic assessment for large dams) should be prepared by a professional engineer registered in the State of Wisconsin. At this time the owner should be informed of:
- i. Any determination of navigability if not previously determined.
 - ii. Potential for the department to deny the application. The factors that would be used in the decision are:
 - a. Existing development on the impoundment and downstream
 - b. Would we authorize the dam today? (impact on critical resources OWR, EWR, etc.)
 - iii. Is the existing structure suitable for continued use (structurally sound and appropriately designed)?
 - a. For dams that have been in existence for up to 20 years – The owner needs to provide proof satisfactory that they own or have an enforceable option or a flowage easement for at least 65% of the land flowed.
 - b. For dams that have been in existence for more than 20 years operating while holding a consistent water level resulting in a defined Ordinary High Water Mark. – The owner may have obtained prescriptive rights to hold the water at that level and periodically flood property to a higher level. As the department does not have the ability to determine when prescriptive rights have been accrued; the owner will need to either follow the process in a. (above), obtain legal prescriptive rights, or agree to indemnify, release and hold harmless the Department for any past, present or future claim contesting the owner's right to flow the affected properties pursuant to the permit/approval for the dam. This indemnification expressly provides that the owner will defend the Department in any such claim or in any claim involving the Department's issuance of the permit/approval for the dam.
 - c. For dams in an unmapped floodplain – Follow process for the owner certification shown in b. above.
 - d. For dams in mapped floodplains constructed prior to the first adopted floodplain mapping, flooding easements are not required. If the dam was constructed after mapped floodplains were adopted, easements are required up to the existing flood elevation on the impoundment and must be provided to the local zoning administrator.
 - iv. If Permit/plan approval process is necessary
 - a. Dams on navigable watercourses built before July 10, 1915 – Use 31.07/31.08 process.

- b. Dams built on watercourses that were determined navigable at the time (check for definition of navigability in the year built) – Use the 31.05/31.06 process.
 - c. Dams built on watercourses that were determined to be non-navigable at the time prior to 1949 – Assume that no approval was needed at the time. Regulate the dam under 31.33 if the watercourse is still non-navigable by today’s standard. If the watercourse would now be considered navigable, put the owner on notice that the dam will be regulated as if it had a permit under 31.05/31.06 in the future.
 - d. Dams built on watercourses that were likely non-navigable in 1949 or after 1949 – Use 31.33 process to authorize. Continue to regulate the dam under 31.33 if the watercourse is still considered non-navigable. If the watercourse would now be considered navigable, put the owner on notice that the dam will be regulated as if it had a permit under 31.05/31.06 in the future.
- B. Voluntarily remove the dam. Depending on the circumstances, the owner may be required to provide engineered plans and adequate erosion control for a removal. If the owner is willing to remove the dam after they have been notified of the process, we should work with them to accomplish this objective as quickly as possible.

The owner will be required to provide a plan for the safe and complete removal of the dam. Unless warranted because of structural size and proximity of downstream development, a professional engineered plan would not be required, but the plans should address the following.

- i. Safe lowering of the impoundment,
- ii. Timing of the project,
- iii. Extent and methods for removal
- iv. Erosion Control Plan that meets the minimum standards contained in the Wisconsin Construction Site Erosion & Sediment Control Standards
- v. Disposal of the removed material,
- vi. Restoration of the removal site
- vii. Potential floodplain changes if located in a zone AE.

The WMS and WME will need to combine Ch 30 and 31 processes to effect the removal of the unauthorized structure. Review of the plans will be required by biologists, stormwater and other department staff for conditions necessary for the approval.

- i. Removal requires a Ch 30 permit if on a navigable watercourse.
- ii. Plan approval is required under Ch. 31 for all dams. Notice and possible public hearing under Ch. 31.253 is required.
- iii. A USACE permit may be required for some dam removals.

For either authorization or removal of an unauthorized dam (2A or 2B): If the structure has been in place for a long time and the impoundment has acquired significant public interest, including riparian interests, we will require a process for public involvement such as a public information hearing, EA (work with DNR liaison to see if EA is required), and opportunity for comments by the public. Unless the department determines the dam is an immediate hazard to persons or property, we will follow the procedures under 31.253 in the case of removal.

3. **Owner unwilling to pursue authorization or removal.** If we do not get the owner to cooperatively resolve these issues we will need to proceed with an enforcement action. Refer to the Enforcement Chapter 50 of the Water Regulation Handbook. For enforcement action and subsequent ordered removal, follow the guidelines for removal requirements as for a voluntary removal.

4. **Tracking the Structures:** All dam-like structures must be tracked in the dams' database. When identified, the WME will enter and locate the structure, and distinguish them in the dam database from authorized dams in the following manner:

- "UNCLR" = unclear authority, if we are not sure the dam was appropriately authorized
- "UNATH" = unauthorized, if we have determined that the dam should have been authorized at the time it was built but was not.

The minimum data that should be entered is the name of the dam, location information (including geolocation), waterbody information, and the information known related to ownership and authorization. If detailed size information is known, that would be entered in the appropriate fields. If only approximate information is known, that should be entered into the comment field. Information on navigability should also be identified, when known.

Since the status of UNCLR and UNATH are temporary states, the status will be updated in the database when the dam is either authorized or removed.

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DISCUSSED OR APPROVED:

for Meg Galloway 4.3.14
Waterway PMT Date
DISCUSSED AT 4.19.12 PMT MEETING

APPROVED:

Michael A. Set 4/3/14
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APPROVED:

Pam Biersack 4.3.14
Watershed Bureau Director Date

APPENDIX 1 Key Dam Dates

This time line of important dates in the history of the dam safety program is only meant to be used as a reference. Details of the specific actions are not provided here and this guidance is not intended for that purpose.

Milldam Acts – encouraged construction of gristmills, sawmills, and other mills by permitting the flowing of the lands of others without acquiring flowage easements for the millpond.

Dates **highlighted in bold** are those most critical to determining when and what type of authorization may have been needed for construction of a dam

1840 – 1st Milldam Act created

1841 – Dams on navigable streams require legislative permission (meandered in original surveys)

1849 – Milldam Act repealed

1859 – Milldam Act revived

1858 – Milldam Act repealed and recreated

1863 – Streams declared navigable are public highways

1871 - 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

1877 – A stream that is navigable at recurring times is navigable. Saw log test established.

1901 – Milldam act was amended to allow cities, villages, and towns to build under act for municipal purpose.

- 1908 – Courts established that the test for navigability for the Milldam Acts is not the same as the test for determining whether a stream is a public highway (waterway)
- 1911 – Milldam Act amended to restrict dams to stream “not navigable for any purpose whatsoever”. The Act excluded streams that were navigable in-fact but not meandered or had been declared public highways.
- 1915 – Dams built before July 10, 1915 (final Water Power Act) need a permit to operate and maintain under 31.07 & 31.08, if the not built under Milldam Act or legislative approval.
- 1917 – Chapter 31 created. Milldam Act rewritten and consolidated with the Water Powers Act and placed under the jurisdiction of the Railroad Commission. (Created a license provision nearly identical to 31.33(2).
- 1919 – Milldam Act amended to reflect repeal of eminent domain provisions of 31.14
- 1943 – A dam is defined as any part of a dam, the structure across the river, the millrace canal, pond, etc..
- 1949 – Milldam Act broadened to include all dams on non-navigable waters.
- 1958 – Court declared that 31.02 applies to all dams maintained before and after enactment.
- 1961 – Transfer and alteration permit system established to make sure new owners were able to care for dams and prevent developers from building dams and then abandoning responsibility for the structures.
- 1969 – DNR created. Dams and Chapter 31 went from PSC to DNR responsibility.
- 1973 – Sawle decision ruled that a mill dam that is abandoned (drawn down) and no longer used for purposes enumerated in Milldam Act must get approval (authorization) under Ch 31.
- 1973 – Dams built prior to the Water Powers Act of 1911, which were not authorized under the Milldam Acts require authorization under Chapter 31 if the present or previous owners did not have prescriptive rights to flow prior to 1911 or if the use under which prescriptive rights were obtained was discontinued subsequent to 1911 for a period of 10 years. (Prescriptive rights may have been secured for another purpose if the flowage was maintained for 20 years without legal action.)
- 1975 – DeGayner established new standards for navigability.
- 1975 – NRB adopts policy on Milldams
- Chapter 31 should be applied in full to all milldams which are no longer legally authorized under the Milldam Act. Use 31.06(3) to determine whether to grant authorization.
 - If PSC or DNR has previously issued decision related to transfer, levels, repairs, etc., the department currently has authority to fully regulate the dam.
- 1981 – Ch 31.185 amended and Ch 710.11 created. A person may not accept transfer of ownership of a specific piece of land on which a dam is physically located unless they comply with s. 31.14(4).
- 1989 – Tempas decision said DNR did not have regulatory authority for cranberry dams under s. 31.14(4).