

NORTH BRANCH, EMBARRASS RIVER FISHERIES AREA
 SHAWANO COUNTY
 MASTER PLAN CONCEPT ELEMENT



*Approved by Natural Resources Board:

8/22/84
 Date

PROPERTY TASK FORCE

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*Subject to Record of Decision and
 Finding of Fact dated
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BACKGROUND INFORMATION

Location

The North Branch, Embarrass River is a major tributary of a highly regarded complex of Class I trout streams originating from springwater sources in Langlade, Marathon and Shawano Counties which combine to form the Embarrass River. It, in turn, flows into the Wolf River, which merges with the Fox River, eventually flowing into the Great Lakes Drainage.

The proposed North Branch, Embarrass River Fishery Area is located completely in Shawano County. The North Branch of the Embarrass River ranks highest of all three major branches of the stream in terms of potential fishery values, and is adjudged as the branch most in need of protection. It is also expected to respond most quickly to fish management practices.

Located in western Shawano County, the proposed North Branch of the Embarrass River Fishery Area (Figure 1) is approximately 40 miles east of Wausau, 25 miles south of Antigo, and 15 miles west of Shawano. Almost one million people live within a 100-mile radius of the boundary.

History

The history of the proposed fishery area and other streams in the Embarrass River complex is one of logging, fire and agriculture. Large scale logging operations began in the 1880's and continued until 1914. The three large branches of the stream, the North, South, and Middle Branches were used for floating logs to sawmills in Tilleda, Caroline, and Tigerton. Around 1900, settlers burned many of the forests to clear land for farming. At about the same time, the dam forming Homme Pond at Wittenberg was constructed on the Middle Branch. Today, dairy farming and forestry constitute the major land uses and establish the economy of the area. Approximately 50 percent of the watershed is wooded.

On May 28, 1976, the Natural Resources Board granted preliminary approval for establishment of a remnant fish management land acquisition project with an acreage goal of 1,000 acres on the Embarrass River system. A subsequent Natural Resources Board Land and Business Committee Acquisition Progress Report dated February 10, 1977, identified the Shawano County Project (also known as the Embarrass River) as having unusual lands important to future resource protection and suggested that the acreage goal be increased from 1,000 to 3,500 acres.

Informational public meetings about the proposed Embarrass River Fisheries Area were held at Wittenberg and Bowler in May, 1977, and public support for the project was mixed. Opposing public opinion centered around state land condemnation and removal of land from the tax rolls. The Shawano County Board has supported protection and preservation of trout streams and has directed that County Conservation Aids be used for trout stream acquisition. However, the limited monies and lack of coordinated land acquisition effort has made this program inadequate to ensure protection and preservation of the trout stream resource. In 1977, the Shawano County Board recognized this problem and passed a resolution supporting the Embarrass River Fisheries project. (Appendix I) Shawano County ranks second in the state in number of trout stream mileage with 401.60, yet it ranks in the lowest tenth percentile among all counties in terms of state ownership of fish management lands with 198.89 acres.

The task force considering and preparing the master plan for the proposed fishery area recommended that the acreage goal of 1,000 acres be expanded to 3,500 acres within a 10,000 acre boundary on all branches of the Embarrass River with the lands to be acquired not specifically designated. It was also proposed that properties be acquired only from willing sellers on the best, first available lands, assuming that all properties within the boundaries bordered Class I trout streams. The 45-day review copy of the master plan recommended this procedure.

Review comments received indicated that approach was not favored by the Federal Agency granting LAWCON funds for land purchases. At the same time, it was recommended that the property boundary be condensed to better define the project.

Accordingly, this master plan proposes that the remnant project be changed to a fishery area, and that acquisition be confined to the North Branch, Embarrass River (Figure 1) with the proposed fishery area to have an approved acreage goal and boundary encompassing 3,555 acres (Figure 2). Included within the boundary in addition to the North Branch are 2 major tributaries, Sportman and Strassburg Creeks and 9 coldwater feeders, totalling 23.5 miles of Class I trout streams, and two ponds totalling 4.5 acres (Tables 1A and 1B). Not included are 2 major tributaries, Hennig and Pony Creeks, and 5 cold-water feeders totalling 17.5 miles of Class I trout streams.

Management

All streams in the proposed fishery area are rated as Class I trout waters and are managed to maintain that quality. None of the streams are presently stocked with hatchery trout. Management efforts at present consist of review of Chapter 30 and 31 permit request investigations, and limited landowner contacts. No attempts have been made as yet to control problem beaver colonies.

Table 1A - Characteristics of streams and trout populations within the North Branch, Embarrass River Fisheries Area, Shawano County.

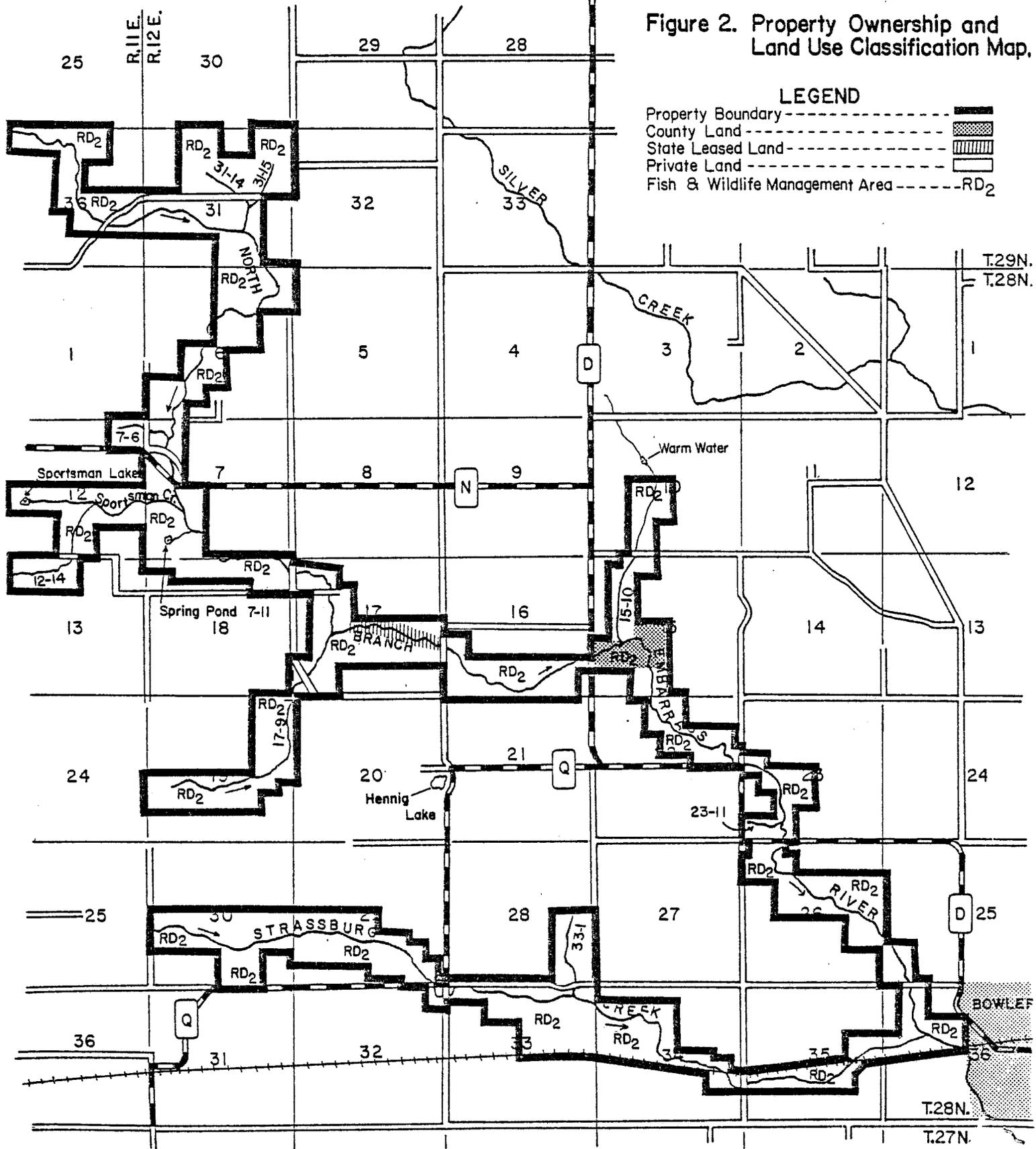
Stream	Township	Range	Length in Miles	Trout Water in Miles	Average Width (ft.)	Average Depth (ft.)	Trout Per Acre
North Branch, Embarrass R.			9.0	9.0	24.0	1.5	351
<u>Tributaries:</u>							
Creek 31-14	29N	12E	0.7	0.7	4.0	1.3	N/A*
Creek 31-15	29N	12E	0.6	0.6	3.5	0.7	3,750
Creek 7-6	28N	12E	0.4	0.4	3.0	1.0	1,214
Sportsman's Creek	28N	11E	1.4	1.4	10.0	0.3	304
Creek 12-14	28N	11E	0.5	0.5	3.0	0.3	230
Creek 17-9	28N	12E	2.2	2.2	8.0	1.3	668
Creek 15-10	28N	12E	1.1	1.1	6.0	1.0	695
Creek 23-11	28N	12E	0.4	0.4	3.0	1.0	426
Strassburg Creek	28N	12E	6.0	6.0	6.0	1.0	1,325
Creek 33-1	28N	12E	0.9	0.9	8.0	0.7	1,000
Creek 7-11	28N	12E	0.3	0.3	15.0	1.0	N/A*
Totals:			23.5	23.5			

* - Information not available.

Table 1B - Characteristics of lakes and spring ponds within the North Branch Embarrass River Fisheries Area, Shawano County.

Name	County	Section	Township	Range	Acres	Maximum Depth
Sportsman Lake	Shawano	NE $\frac{1}{4}$, SE $\frac{1}{4}$, S 12	28N	11E	2.0	10'
Spring Pond 7-11	Shawano	S 7	28N	12E	2.5	2'
Totals:					4.5	

Figure 2. Property Ownership and Land Use Classification Map.



LEGEND

- Property Boundary -----
- County Land -----
- State Leased Land -----
- Private Land -----
- Fish & Wildlife Management Area -----RD₂

NORTH BRANCH EMBARRASS RIVER FISHERY AREA



Scale 1":4224'

GOALS, OBJECTIVES AND ADDITIONAL BENEFITS

Goals:

To preserve, protect and properly manage the North Branch, Embarrass River Fisheries Area in a manner that maintains and enhances trout habitat, forest and wildlife resources, and its aesthetics, while providing opportunities for high quality public recreation, particularly trout fishing.

Annual Objectives:

1. Provide 2,600 participant days of fishing for brook and brown trout with an average harvest of 0.7 trout per fishing hour.
2. Manage the waters of the streams in the fishery area to sustain a fall standing crop of 75 pounds of trout per acre.
3. To manage, where practicable, timber lands to provide an annual allowable harvest of 300 cords of aspen and hardwood pulpwood and 30,000 board feet of hardwoods.

Additional Annual Benefits:

1. Provide 2,100 participant days of gun and archery deer hunting, 850 participant days of ruffed grouse and woodcock hunting, 350 participant days of small game hunting and 100 participant days of trapping for beaver, muskrat, otter and mink.
2. Provide 500 participant days of compatible recreational benefits including hiking, cross-country skiing, berry and mushroom picking, bird watching, nature study and photography.
3. Land control will enhance water quality by controlling erosion and other negative agricultural practices.
4. Provide habitat for migratory endangered and threatened species and for non-game species.

RESOURCE CAPABILITIES

Geology, Soils, and Hydrology

The North Branch, Embarrass River Fisheries Area is located in the southeast portion of the Northern Highland Province (Martin, 1965, the Physical Geology of Wisconsin). Bedrock geology consists of Pre-Cambrian igneous rock of mostly Bowler Granite with some Tigerton Anorthosite. The bedrock is covered by glacial till from 0-200 feet thick.

The surface features of the North Branch, Embarrass River watershed are the result of the Continental Glacier, in particular the Green Bay lobe. Evidence of glaciation is found in pitted outwash plains lying to the east of morainic ridges trending from north to south. As a result of glaciation, stream drainage patterns do not follow the dip of underlying bedrock, but are obstructed by the morainic ridges and tend to be somewhat irregular. A drop of 230 feet in elevation occurs between the northwest part of the fishery area at the headwaters of the Northern Branch and the southeastern edge at Bowler.

Upland soils developed in glacial drift are of the Kennan, Norrie, Onamia, Chetek, Antigo, Goodman, Iron River, and Elderon series. All are well drained, acid, sandy soils with severe agricultural and recreational limitations on slopes and moderate limitations on level areas. Lowland soils are Riflepeat and Markey Muck. Both are poorly drained, acid, organic soils with severe agricultural, development, and recreational limitations.

The sandy upland soils and glacial till allow for good infiltration, percolation, and groundwater flow as evidenced by the many trout streams in the area. There is no bedrock aquifer, but moderate to large quantities of groundwater are available from the glacial drift aquifer which is 5 to 15 feet below the surface. As with the streams, general groundwater flow is to the southeast.

Wildlife Wildlife in the North Branch Embarrass River fishery area is varied and abundant. The existing land use patterns and the natural interspersions of streams, wetlands, and wooded areas result in many productive habitat types.

Game mammals found are deer, red fox, otter, beaver, muskrat, gray squirrel, raccoon, cottontail rabbit, snowshoe hare, black bear, and bobcat. The fishery area is in deer management unit 47 and is excellent deer range. Overwinter deer densities average 20 per square mile. All other game mammals are abundant except otter, black bear and bobcat. Otter are regularly found on the fishery area's streams but cannot be considered abundant. Bear and bobcat occur in low numbers mainly in the northern part of the fishery area, and only a few of these two species are taken by hunting in the area each year.

The primary game birds are ruffed grouse and woodcock. The stream borders in the area are their main habitat. Much of the upland in the area is hardwoods and not good grouse or woodcock habitat. Without the alder-aspenswamp hardwood habitats along the streams and the lowland conifer swamps these birds would not be as abundant as they are. Woodcock nest throughout the area but are most abundant during fall migration.

The fishery area only has fair waterfowl habitat. No large marshes exist and the only habitat is the streams themselves. Mallard, wood duck, blue-winged teal, green-winged teal, black duck, and hooded mergansers nest in low numbers along the streams. Beaver ponds provide the best available habitat for waterfowl in the fishery area.

Other species whose status is being closely monitored by DNR which are known to occur regularly in this part of Shawano County of the fishery area are: harrier, cricket frog, badger, otter and bobcat, woodchuck, fox squirrel, bluebird, green heron, great blue heron and a few sandhill cranes.

Non-game fauna is very abundant. No detailed surveys have been performed but essentially all small mammals, birds, reptiles, and amphibians common to this latitude in Wisconsin occur within the boundary.

The only endangered species thought to exist in the fishery area is the wood turtle. Two were observed on July 20, 1978 by DNR personnel just outside of the project on the North Branch of the Embarrass, near Bowler. No other endangered species are known to exist although bald eagles and ospreys may occasionally be seen throughout the region during migrations.

The threatened red-shouldered and Cooper's hawks may nest within the area. No Cooper's hawks have been seen in recent years but in this part of Shawano County the extensive wooded areas appear to be good habitat. A nesting red-shouldered hawk was documented outside the boundary 3 miles due north of Bowler on June 11, 1978 so this hawk may also occur within the area.

All areas of development will also be examined for the presence or absence of endangered and threatened species and appropriate protective measures will be taken for significant sites. If any sites are found during development, construction will be suspended until the Office of Endangered and Nongame Species (DNR) is consulted. The site(s) will be evaluated and protective measures taken for significant locations.

Vegetation

As most of the North Branch, Embarrass River Fishery Area is lowland, vegetation is mostly that associated with poorly drained muck and peat soils. (Table 2 and Figure 3).

TABLE 2
FOREST RECONNAISSANCE TYPES, NORTH BRANCH, EMBARRASS RIVER FISHERY AREA

<u>Type</u>	<u>Acres</u>
Swamp conifers	1,750
Lowland brush	500
Swamp hardwoods	600
Northern hardwood and aspen	355
Marsh (sedges and grasses)	50
Field and agricultural land	<u>300</u>
TOTAL	3,555

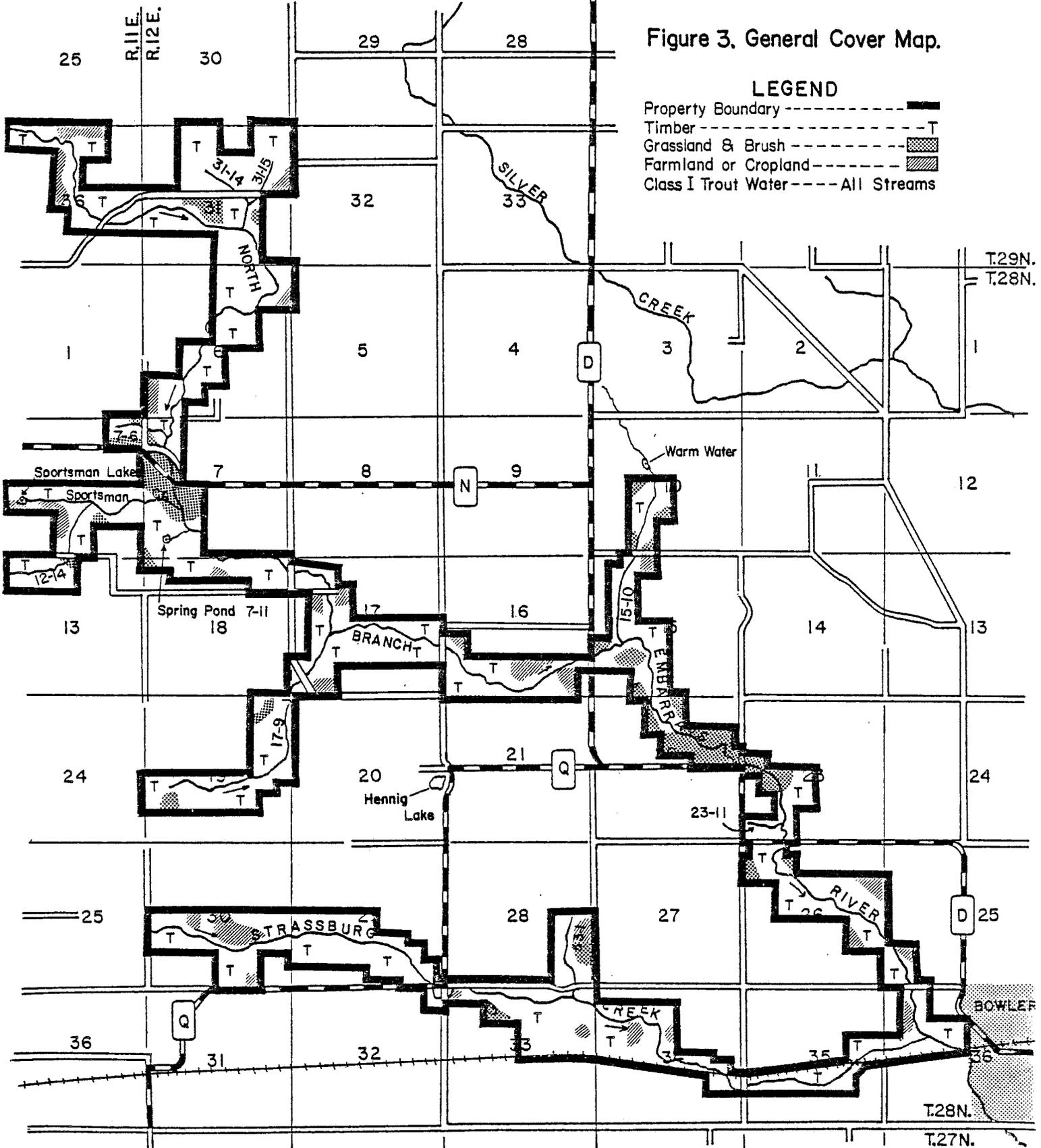
Approximately half of the 3,555 acres is swamp conifer type (white cedar, white spruce, balsam fir, and hemlock). This vegetation type is important as a wintering area for deer and grouse. About the only other plant species found in this type is Lycopodium.

Major tree species of the swamp hardwoods are black ash, elm and red maple. Witch hazel, blue beech, various wild cherries, and gray dogwood are common shrubs associated with this type and are important for wildlife and songbird food. Some grasses and sedges are interspersed through this type.

The majority of the lowland brush is tag alder. Other species associated with tag alder are red osier, and willows with some sedge scattered throughout. There are no large blocks of this type; most are found along stream edges.

Northern hardwoods (sugar maple, yellow birch, basswood, and some red oak) are found on the well drained sandy loams in the boundary. Other species include prickly ash, highbush cranberry, hazel nut, sumac, blackberry and elderberry. All wildflowers common to this type are found in the area, most notably trillium and ginseng. Small patches of aspen are found throughout the fisheries area. White birch, elm, and red maple are included in both swamp hardwood and northern hardwood types.

Figure 3. General Cover Map.



NORTH BRANCH EMBARRASS RIVER FISHERY AREA



Scale 1":4224'

Some marsh (sedges and grasses) is found within the boundary. However, this type is mostly found among edges of swamp hardwood and lowland brush.

Abandoned fields and cultivated land are scattered throughout the area. While the boundary was drawn to omit as much cultivated land as possible, that located in the boundary will not be cultivated.

Some parts of the proposed fishery area have good potential for timber management in the northern hardwood and swamp hardwood types. These include section 31, Town of Hutchins, and sections 17, 18, 19, 29, 30 and 33 of the Town of Almon. Swamp conifers will not be logged.

Timber management would consist of selective harvest and thinning in the northern hardwoods and swamp hardwoods. Small areas of aspen will be clearcut to provide wildlife food and maintain the aspen cover type. The amount of timber production that could be expected could be 30,000 board feet per year along with 300 cords of aspen and hardwood pulpwood per year.

Fish and Water Resources

Streams in the North Branch, Embarrass River Fisheries Area are of generally high water quality. Good spring flow and groundwater recharge keep water temperatures well within brook trout tolerances in Class I sections of the streams. Two spring ponds are also included in the fishery area and are listed in Table 1B. Dense vegetation along most streambanks aids in keeping water temperatures cool in summer and greatly reduces nutrient inflow from surrounding agricultural fields. Water temperatures in the lower reaches of the North Branch below the fishery area are more seasonally variable; thus, they are ranked as Class II trout water. Beaver flowages also cause seasonal temperature fluctuations. For example, one 40-acre beaver flowage warmed to 74°F in the summer and had an ice cover in winter; both deleterious to trout.

Fish species found within the project are typical of those found in central Wisconsin trout streams. Detailed surveys for each stream are on file in the Shawano office. General trout and warmwater fish populations of major streams within the fishery area and stream characteristics are described in the narrative below and are summarized in Table 1A.

North Branch, Embarrass River, its Tributaries, Feeders and Lakes

The North Branch begins in a series of springs in Sections 25 and 26, T29N, R11E, in Shawano County and flows southeasterly through Bowler and Tilleda. The portion of the North Branch within the proposed fishery area is 9 miles long and averages 24 feet wide. Approximately 40% of the watershed is in pasture, hay, and grains, and 42% in upland timber. The remaining watershed is shrub and conifer wetlands which occur along 70% of the streambanks. Two major coldwater tributaries, Sportsman and Strassburg Creeks, and 9 smaller feeder streams, totalling 23.5 miles, contribute to the river in the fishery area. All tributaries are inhabited by brook trout and are excellent trout spawning areas. Brown trout are more abundant in the lower reaches of the stream.

The North Branch has hard, slightly alkaline, stained water. A strong base flow and many spring feeders in the upper reaches make it an excellent trout stream above Bowler. The bottom averages a composition of 45% sand, 17% gravel, 14% silt, 9% boulders, and 15% detritus, rubble, and bedrock.

Aquatic vegetation consists of Sparganium, Vallisneria, Fontinalis, and Potamogeton spp. Common invertebrates include stoneflies, mayflies, caddisflies, the freshwater shrimp Gammarus, crayfish, and smaller numbers of dobsonflies, dragonflies, dipterans, fingernail clams, and freshwater sponges.

From the headwaters to Bowler, the North Branch with its tributaries and feeders is Class I trout water with reproduction of both brook and brown trout. Brook trout in the North Branch average 302 per acre and brown trout average 49 per acre. Densities of trout for other streams in the fishery area are shown in Table 1A.

The variety of forage species is abundant in the lower sections and includes white sucker, northern hogsucker, common shiner, blacknose dace, longnose dace, creek chub, pearl dace, johnny darter, central mudminnow, hornyhead chub, and brook stickleback.

Sportsman Lake, located in Section 12, T28N, R11E (Figure 2 and Table 1B) is a spring-fed pond maintained by a lowhead dam and fish barrier at the outlet. The lake was chemically treated in 1954 and 1967 and was dredged to 7 feet in depth in 1967. The outlet of the lake is called Sportsman Creek. Spring Pond 7-11 is shallow (2') and silted. It supplies water to the North Branch by way of Creek 7-11. Both ponds are presently in private ownership. Sportsman Lake was previously leased, with the lease expiring in 1974.

Historical and Archaeological Features

There are no known architectural, historical or archaeological features within the proposed North Branch, Embarrass River Fishery Area, because no systematic survey work to locate such features has been conducted to date. It is very probable that there may be significant cultural material (particularly prehistoric archaeological remains) within the fishery area; but these resources have yet to be identified.

Thus, all plans for the development or improvement of the fishery area will be submitted to the State Historical Society prior to any action for review of the potential impact of the plans on historical or cultural material.

Current Ownership

Acquisition to the present time on the Embarrass River system remnant project in Shawano County has been confined to an 80-acre purchase outside of the boundary on the Middle Branch of the Embarrass (S1/2, NE1/4, Section 11, T29N, R11E) which includes 2,000 feet of stream frontage and the 3.1-acre Embarrass Springs spring pond.

Shawano County has purchased 95 acres on the North Branch within the boundary (Figure 2) with County Conservation Aids monies. Sixty acres are located in the N1/2, SE1/4, Section 15, T28N, R12E, and contain 3,000 feet of frontage (Figure 2). Just below the project boundary on the North Branch, Shawano County owns 35 acres located in Sections 31 and 32, T28N, R13E, including about 3,000 feet of frontage. On the middle branch, outside of the boundary, Shawano County owns 83 acres in Section 1, T27N, R11E, which includes 3,500 feet of Wilson Creek.

Property has been purchased or leased on the Embarrass River in other counties. In Langlade County the DNR purchased a 30-acre tract located in the NW1/4, Section 25, T20N, R11E, containing a 2.0-acre spring pond known as Deneault Springs on the Middle Branch. The DNR has leased streambanks with two small spring ponds near the headwaters of Spranger Creek, a tributary of the Middle Branch in SW1/4, Section 34, T28N, R10E, Marathon County. The lease on this area, known as Falstad Springs, was recently renewed and will expire in 1998. Twenty-year DNR leases on three miles of Dent Creek will expire in 1991 and a 20-year lease within the boundary on 1,500 feet of the North Branch will expire in 1997. All leases are in the 20-year option period and cannot be renewed by DNR option.

The Tigerton Lumber Company, Tigerton, Wisconsin, owns land on some of the streams and has indicated it will not sell but will trade property. Because the company allows public entry and the land is not pastured their unwillingness to sell is not a problem as pertains to fishing at this time. However, the removal of trees by logging can be damaging to water temperatures of the streams, as it occurs. Habitat work cannot be implemented on Tigerton Lumber lands unless permanent easements are acquired.

A total of 71 private landowners are included within the proposed boundary.

Current Use

On opening weekend of trout fishing in 1979, anglers fished over 2,000 man-hours on 12 western Shawano County streams including those within the proposed fishery area. They traveled an average of 56 miles, one way, to fish and 55 percent of the anglers drove over 40 miles. Similar results were noted in a creel census conducted in 1973 on seven Shawano County streams which included the proposed North Branch, Embarrass River Fishery Area (Appendix II).

Hunting small game and deer are also major recreational uses of the area. Substantial trapping for beaver, muskrat, and mink occurs in some locations. Very little snowmobiling on designated trails, or canoeing is done on the area.

Timber harvest and cattle pasturing along streams constitute the majority of non-recreational use along streams. Farming and timber harvest are dominant in the upland areas.

Land Use Potential

Most soils along streams in the project area are peat and muck. These soils are unsuitable for development and agriculture due to the high water table. Upland adjacent to project streams tends to be rocky and generally suitable only for pasture. The upland soils have the potential for home development.

Initially, land control should be sought on areas of extreme habitat degradation, such as intensively pastured areas and important cold water sources. For ease in establishing property lines and fencing, if necessary, DNR land control should extend from the stream to the upland if possible. Property boundaries through heavy vegetation in lowland areas will greatly increase any fence maintenance costs and increase potential for trespass onto private land.

Land acquired within the proposed fishery area should be classified as fisheries and wildlife management areas (RD₂) (Figure 2). Wildlife Management will be limited by travel constraints and forestry management will be practiced on acquired lands where possible using methods having neutral or positive affects on the stream.

No scientific or natural areas delimited by the Scientific Areas Preservation Council or DNR staff on the Embarrass River complex of streams are located within the boundary of the North Branch, Embarrass River complex of streams are located within the boundary of the North Branch, Embarrass River Fishery Area.

RESOURCE MANAGEMENT PROBLEMS

Access

In general, access to streams in the proposed North Branch, Embarrass River Fisheries Area is confined to road crossings. Of the 12 streams in the fishery area there is some type of public ownership or lease on nine.

The portion of the North Branch included in the project is 9.0 miles long with about a half mile in public ownership in Shawano County and 2,500 feet of leased stream frontage. Further access is available by 10 road crossings.

Of the remaining 11 tributaries or feeder streams in the proposed fishery area, Strassburg Creek has 2 road crossings and Sportsman Creek, none (Figure 4). Feeder streams with road crossing access include: one each on Creek 31-15, Creek 31-14, Creek 7-6, Creek 12-14, Creek 17-9, Creek 15-10 and Creek 33-1.

Currently much of the land along the streams is posted against trespassing which discourages entry by anglers. This problem is expected to increase substantially in the future on non-fishery area lands.

Development

Encroachment of homes and cottages on streams is expected to increase in non-fishery area lands and where soil types allow development. Developments not only eliminate the wilderness affect of streams but also add to enforcement of Chapter 30 and 31 violations and permits.

Agriculture

A significant portion of the proposed fishery area is presently used for pasturing cattle. This is detrimental to water quality, trout habitat, and wildlife habitat. A major increase in streamside pasturing is not anticipated for the future, and with acquisition, is expected to decline.

Public Overuse

Public overuse may occur on some of the fishery area land. This is already occurring on the Shawano County land along the North Branch of the Embarrass where unauthorized camping and large concentrations of fishermen can be found. This will lead to enforcement problems with littering and camping.

Recent survey data from the Prairie River in Lincoln County indicates that in areas of easy access, the harvest of brook trout larger than six inches is heavy. To restrict access, no motorized vehicles will be allowed on fishery area lands except at designated parking areas.

Beaver

Present beaver populations in the project area are the highest since logging days. Stream impoundment by beaver dams destroys trout habitat, prevents spawning migrations, raises summer water temperatures, and cools the water excessively in winter. All beaver and beaver dams will be removed from project lands and public trapping will be encouraged to remove beaver. However, these actions will have an adverse impact on waterfowl habitat.

LONG RANGE RESOURCES, RECREATION NEEDS AND JUSTIFICATION

In 1966 the Wolf River Basin Regional Planning Commission (now the East Central Regional Planning Commission) published a report describing the region's growth and potential. The following comments from the report discuss the future recreation needs and opportunities in the Wolf River Basin of which the Embarrass River Fisheries Area is a part:

1. The region's climate is suited for year-round recreation.
2. The steep hills, potholes, and wetlands are unsuited for development. These areas should remain in their natural state to preserve the scenic identity of the region.
3. Efforts should be intensified to secure considerable additional land for state and local parks, and fish and game habitats.
4. By the year 2000, water and scenic oriented demands will double. Highest demands will continue to be centered on swimming, boating, fishing, and sightseeing.

5. The region is noted for its abundant fish and game resources and efforts should be made to preserve the excellent fishing and hunting opportunities.
6. Urban development is catching up with the region. Action must be forthcoming to preserve its attractiveness. The Wolf River Basin is located in close proximity to population centers in Wisconsin, and this area will receive increased recreational pressure.
7. Floodplains offer exceptional recreational opportunities. Subject to flooding, these areas offer little opportunity for permanent development.

The Upper Embarrass River system, of which the North Branch is an integral part, has a statewide reputation as excellent trout water as was evidenced in interviews with anglers from Milwaukee, Sheboygan, Wausau, and the Fox River Valley during a creel census on fishery area streams the opening weekend of the trout season in 1978. As the population of the Fox River Valley and Wisconsin River Valley grows, the North Branch, Embarrass River Fisheries Area will become more important. The 1977 Wisconsin Outdoor Recreation Plan predicts a 21% increase in fishing pressure by 1995 in Region 9 (Shawano, Marinette, Oconto, and Menominee Counties).

Public fishing areas on the Plover River in adjoining Marathon County and nearby streams in Waushara and Waupaca Counties receive approximately 350 hours of angling per acre annually. The North Branch, Embarrass River Fisheries Area may remove some of this heavy pressure or attract an entirely new set of anglers. Anglers interviewed during the 1978 creel census expressed concern over increasing amounts of posted land along trout streams.

Streams in the proposed project offer only marginal water for canoeing and swimming. Lower sections of the North Branch are best canoed during high water periods. For this reason canoeing on the streams is not expected to increase significantly. Canoeing and swimming will be allowed, but development aimed at these types of recreation is not planned, nor will it be encouraged.

As with trout fishing, hunting opportunities are stabilizing or decreasing in the Upper Embarrass River watershed due to posting of private lands. Over 200,000 acres of public lands open to hunting are located within 50 miles of the North Branch, Embarrass River Fisheries Area. A majority of this land is County and National Forest. The 1977 Wisconsin Outdoor Recreation Plan predicts a minimum 20% increase in hunting by 1995. Where compatible with the fish habitat objectives, wildlife and forestry management techniques designed to benefit game habitat conditions will be encouraged. Hiking, nature study, and cross-country skiing are increasing dramatically throughout Wisconsin. If demand becomes great enough, a combined hiking and cross-country ski trail system compatible with project goals could be established.

Motorized vehicles will not be allowed on fishery area lands except at designated parking areas due to possible erosion, noise, increased access, and conflict with other users. It is not anticipated that tracts of land large enough to support motorized vehicles and other recreational users will be obtained. Noise from motorized vehicles detracts from the trout fishing experience and is not compatible with project goals. Snowmobile trails total 175 miles in Shawano County at the present time.

Camping will not be allowed on the area as private and county campgrounds are in close proximity. Camping requires sanitary facilities, water, and trash pickup and would increase litter and use of the area. Additional money would be required for wells, sanitary facilities, and manpower.

ANALYSIS OF ALTERNATIVES

No Fishery Area

At present, very limited public ownership of stream frontage exists, and further loss of trout habitat and fishing opportunities can be expected if the fishery area is not approved. Increased posting of land along streams will further limit public access. Cattle pasturing and private development along streams has, and will continue to restrict public access, decrease aesthetics, and adversely affect habitat conditions.

With fishing pressure and public use expected to increase, future generations will find the few existing public areas overcrowded. Without the fishery area, productive trout water will not be protected and potentially productive water could not be developed with accepted habitat improvement techniques.

Enlarge the Fishery Area

The goal of the project is to maintain or improve the trout fishery resource. To fully accomplish this goal, the ideal situation would be control of almost the entire Class I trout stream frontage on all branches, tributaries and feeders of the Embarrass River system. The estimated 22% of the Class I stream frontage to be acquired under the present revised goal of 3,500 acres may not provide sufficient resource protection to adequately maintain or improve the trout resource in the future. Thus, the option of further enlargement should be considered if the 22% ownership will not protect the resource. The Embarrass system has 105 miles of Class I trout water plus 43 miles of Class II trout water.

Acquisition Goal of 3,500 Acres

At present, the Embarrass River Fishery Area has Natural Resources Board preliminary approval to acquire 1,000 acres as the project goal. Members of the Master Plan Task Force unanimously recommend approval to enlarge the area to 3,500 acres. This will result in acquisition of approximately 22% (23.5 miles) of the stream mileage in the project. Acquisition and protection of cold water sources and improvement of habitat in degraded sections of streams will have a beneficial impact on the entire watershed. Protection or improvement of Class I tributaries will have a beneficial impact on the Class II sections of the North Branch.

Acquisition Goal of 1,000 Acres

At present, the acquisition goal granted preliminary approval by the Natural Resources Board is this alternative. This goal would result in acquisition of approximately nine percent of the stream mileage in the Embarrass River system. From the standpoint of resource protection and enhancement, an acreage goal of 1,000 acres is considered minimal.

However, an acreage goal of 1,000 acres may be considered as an alternative for two reasons:

1. Informational meetings regarding the project were held in May, 1977, at Wittenberg and Bowler. At these meetings the public was informed the project goal would be 1,000 acres.
2. The Natural Resources Board has approved a goal of 1,000 acres pending approval of the master plan.

As with a goal of 3,500 acres, the 1,000-acre goal could be acquired by delineating the specific lands for acquisition.

RECOMMENDED MANAGEMENT PROGRAM

The recommended management program for the proposed North Branch, Embarrass River Fishery Area includes acquisition of 3,555 acres within a similar size boundary. When possible, land will be obtained by fee title. If this cannot be accomplished, perpetual easements will be obtained. Whenever possible, boundaries will be along the upland and include the entire floodplain. Fences, if necessary, will be easier to construct and maintain if on the upland, and property lines will be more easily identifiable for the public.

Areas delineated for acquisition are important cold water sources, spawning areas, or sections of stream needing habitat restoration or preservation. Moreover, all streams included in the area are Class I trout streams. For this reason any parcel obtained within the boundary would be important. Although some dwellings exist within the boundary, current prices may prohibit purchase.

Where needed, erosion prevention, agricultural runoff prevention and stream habitat improvement, shown in Figure 4, will be completed. Habitat work will consist of brushing, half logs, bank covers, instream devices, or any combination thereof. In areas of high use, a total of eight parking lots to hold a maximum of five cars will be constructed.

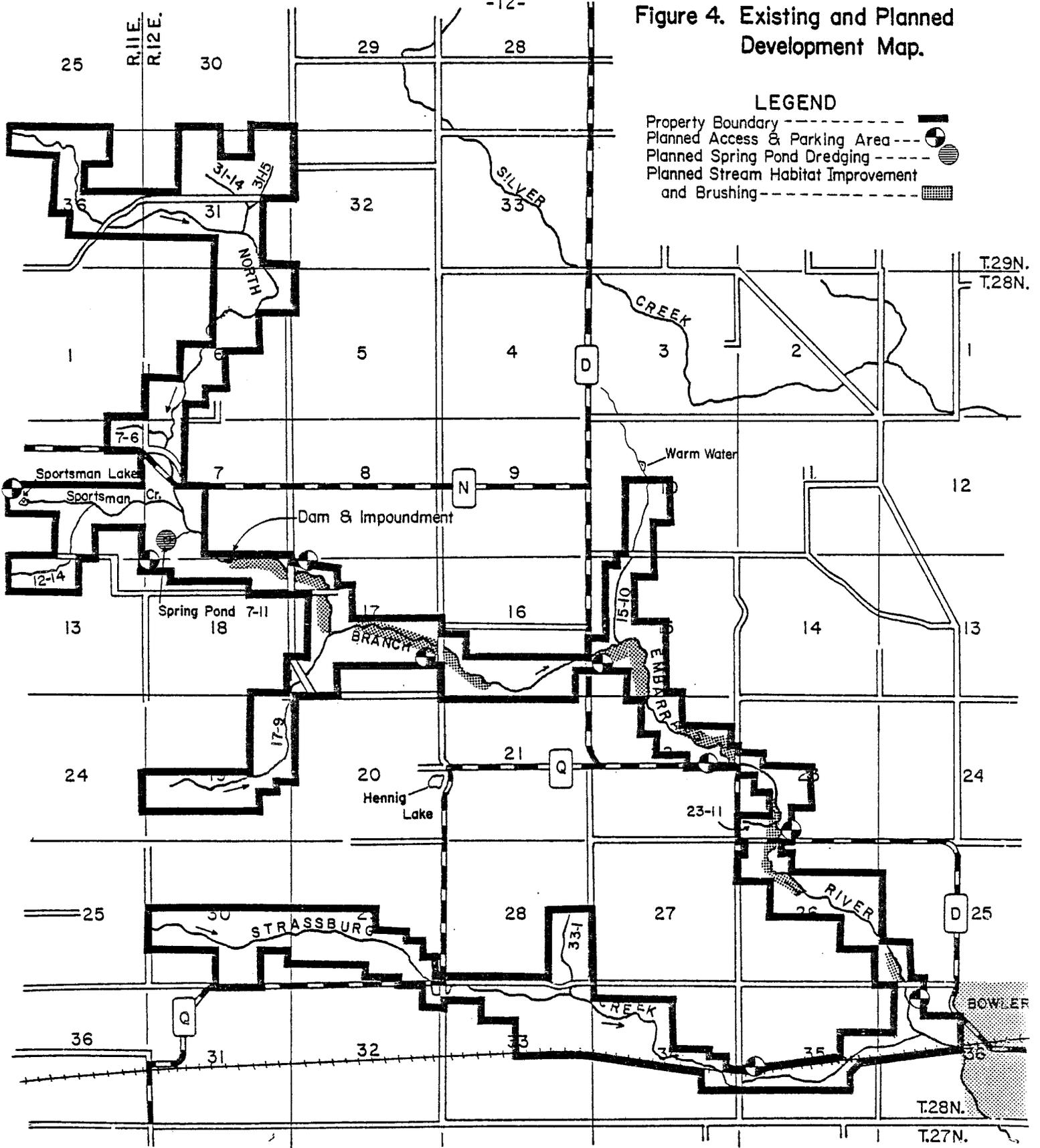
A very old dam is located on the North Branch, Embarrass River (Figure 4) in Section 18, T28N, R12E, which creates a 6-acre impoundment that is heavily silted, and the shallow flowage contributes to excessive summer warming and winter cooling of the water which is deleterious to trout. If the property is acquired, the dam will be removed. For similar reasons, all beaver dams will be removed on properties acquired within the boundary of the fishery area. Spring Pond 7-11 in Section 7, T28N, R12E, (Figure 4) is proposed for dredging if acquired.

Demand for hiking and cross-country ski trails may also exist. If needed, these will be constructed for minimum impact on the surrounding environment. Other developments are not anticipated or desirable. The State Historical Society will be consulted prior to any development.

Wildlife and forest management will be limited and restricted to some acquired parcels. Although the project goal is preservation and restoration of trout habitat, wildlife and forest management practices can be implemented if they do not affect the streams.

A total of 71 landowners are located within the boundary and all will not be willing sellers. If streamside cattle pasturing is destroying habitat on unobtainable parcels, an effort will be made to enlist owners in the streambank fencing program offered by the Agriculture Stabilization and Conservation Service. This program provides 80% cost sharing for fencing cattle from streams. Educational programs will be conducted to explain the benefits to both landowner and sportsman. The fencing program does not require that fenced land along streams be open to the public.

Figure 4. Existing and Planned Development Map.



LEGEND

- Property Boundary - - - - -
- Planned Access & Parking Area - - - - -
- Planned Spring Pond Dredging - - - - -
- Planned Stream Habitat Improvement and Brushing - - - - -

NORTH BRANCH EMBARRASS RIVER FISHERY AREA



Scale 1"=4224'

Estimates for the purchase of 3,555 acres range from \$1,500,000 to \$3,000,000. Perpetual easements cost 60-90% of purchase. Costs for habitat improvement vary from \$3,000 per mile for brushing up to \$36,000 per mile for bank covers and wing deflectors. Funding for habitat work is anticipated from trout stamp sales.

The fishery area, if approved, will be administered from the Shawano office.

COPY

Attachment

WHEREAS, Shawano County has over 390 miles of Class I and II trout streams less than 10 miles of which are in public ownership, and

WHEREAS, public access to much of the rest is quite restricted, and

WHEREAS, Shawano County streams are heavily fished by residents of Shawano County and the Fox River Valley because they can be reached by a short evening drive, and

WHEREAS, access to trout streams in the area has now been further restricted by the recent restoration of the Menominee and Stockbridge-Munsee lands to Federal Trust status, and

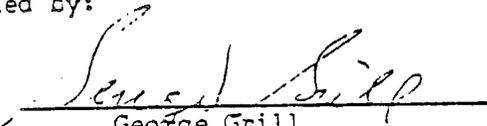
WHEREAS, many Shawano County trout streams flow through primarily agricultural (dairy lands) and bank erosion and siltation as a result of livestock grazing streambanks has become a major factor in destroying trout habitat, and

WHEREAS, D.N.R. programs for habitat protection and streambank access have provided excellent trout fishing in many areas of Wisconsin, and

WHEREAS, very little such work has been done in Shawano County.

NOW, THEREFORE BE IT RESOLVED THAT THE SHAWANO COUNTY BOARD OF SUPERVISORS do hereby urge the Department of Natural Resources to rapidly develop the proposal adopted by the Natural Resources Board at its June 1976 meeting for remnant area land easement and acquisition because such a program is badly needed to provide continued public access and habitat protection to the high quality trout stream resource in Shawano County.

Submitted by:

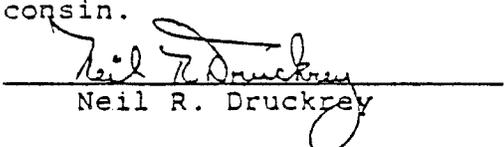

George Grill

April 19, 1977

CERTIFICATION

I, Neil R. Druckrey, County Clerk of Shawano County do certify that the above resolution #99 is a true and correct copy of the resolution as adopted on April 19, 1977 by the Shawano County Board of Supervisors, Shawano, Wisconsin.

Dated August 24, 1978


Neil R. Druckrey

APPENDIX II

Results of Creel Census, 1973 and 1978

Distance Anglers Traveled to Fish (By Percentage)

	<u>1973</u>	<u>1978</u>
Over 100 Miles	27	10
60 - 100 Miles	0	21
40 - 60 Miles	28	24
0 - 40 Miles	<u>45</u>	<u>45</u>
	100%	100%

The 1973 Creel Census was conducted on seven Shawano County streams, three of which are included in the project. The 1978 creel census was conducted on all Embarrass River Fisheries Area during the first two weeks of the fishing season.

Appendix III
MASTER PLAN COMMENTS BY OUTSIDE AGENCIES

A number of comments were received regarding the 45-day review copy of the Master Plan. Where appropriate to the revised master plan, DNR response is shown.

Mr. Richard Dexter, The State Historical Society:

"The statement on page 15 of the Master Plan regarding Historical and Archeological Features and Natural Areas is essentially correct: there are no known architectural, historical, or archeological features within the proposed Embarrass Fisheries Area. However, we must point out that there has been no systematic survey work in this area designed to locate such features. It is very probable that there may be significant cultural material (particularly prehistoric archeological remains) within the Fisheries Area; but these resources have yet to be identified. Until the necessary survey work has been completed, care should be exercised to prevent the inadvertent destruction of such cultural material.

The proposed policy that 'if artifacts are found on acquired lands needed work will be delayed until the location is surveyed by a qualified archeologist' is inadvisable. We recommend that this policy be amended to the effect that all plans for the development or improvement of the Fisheries Area be reviewed for their potential impact on historical and cultural material prior to any action. This review should be coordinated with our office. The amendment has two practical benefits: it insures greater protection for the Area's cultural resources and, by identifying potential problems early in the planning state, it largely avoids the costly delays that could be incurred if significant material is discovered after construction has begun."

DNR Response: The portion of text relating to Historical and Archeological Areas has been replaced with the following:

There are no known architectural, historical or archeological features within the proposed North Branch, Embarrass River Fishery Area, because no systematic survey work to locate such features has been conducted to date. It is very probable that there may be significant cultural material (particularly prehistoric archaeological remains) within the Fishery Area; but these resources have yet to be identified.

Thus, all plans for the development or improvement of the Fishery Area will be submitted to the State Historical Society prior to any action for review of the potential impact of the plans on historical or cultural material.

Mr. Forest Stearns, Chairman, Scientific Areas Preservation Council:

The 3rd paragraph on page 8 is questionable - "Non-game fauna is very abundant. No detailed surveys have been performed, but essentially all small mammals, birds, reptiles, and amphibians common to this latitude in Wisconsin occur in good numbers in the project." We suggest that surveys of non-game species be conducted to determine species presence and importance.

DNR Response: Budgetary, manpower and energy restrictions in effect preclude specific surveys of non-game fauna. Observations to obtain the required information will be made whenever possible.

Page 8, last paragraph - "Vegetation throughout the project area is of a typical northern mesic hardwood forest type." This statement contradicts Table II on page 9 which lists 7200 of 10,000 acres as wetland types. It is likely that no typical northern mesic hardwood is present.

DNR Response: Agreed. The section on vegetation has been revised.

The discussion of vegetation on page 9 is actually a discussion of forest types and their economic management. It ignores other vegetation uses and values.

DNR Response: The revised section on vegetation considers all species of vegetation and their importance to wildlife and songbirds.

On page 16, 1st paragraph - this very brief reference to scientific areas and natural areas should be changed to reflect recommendations for 4 potential natural areas submitted by Scientific Areas Section personnel on December 7, 1979. Since the project contains 30 miles of Class I trout water, several reaches of stream may be of high enough natural quality to merit consideration for natural area management.

DNR Response: The scientific areas recommended are outside the boundary of the proposed fishery area.

On page 17, encroachment by residential development is mentioned as a threat. We suggest that scenic easements be considered as an appropriate tool to limit residential development in special "problem" areas.

DNR Response: The Master Plan recommends that when lands cannot be acquired by fee title, perpetual easement will be obtained if possible.

We support the goal of acquiring 3,500 acres within a 10,000-acre acquisition boundary.

DNR Response: The goal has been modified to 3,555 acres within a boundary of the same size.

Mr. Henry Kolka, Wild Resources Advisory Council:

Page 4, bottom page - Goal--The WRAC recommends an addition of one word following trout--habitat. Comment-- not very logical to enhance a trout.

DNR Response: An excellent suggestion. Addition made.

Pages 4 and 5 - Objectives--The WRAC have a general agreement with the stated five objectives, except for item 3. The Council feels that proposal 3 is contrary to the philosophy of your goal and has negative merit in your trout water management. Figure 2 (project map) shows alinement of narrow corridors for the 12 project streams. Unfortunately neither the text or the map give average corridor widths, however, judging from the comparative measurements (from the map) they do not appear to be wide enough to maintain forestry practices. The council suggests a no on this issue.

DNR Response: Forest Management personnel recommend the harvest of mature timber on state-owned lands. If the recommended 3,555 acres are acquired, enough lands will be available to maintain forestry practices.

Page 5 - Additional Benefits--The Council (WRAC) suggests that nature study and nature photography be added to item 1 of compatible uses. We do not agree that "forest management techniques are compatible with either the goal or objectives of the project."

DNR Response: Nature study and photography have been added.

Page 6 - last paragraph --To emphasize the last statement an addition could be enlightening by adding "particularly on point and nonpoint pollution."

DNR Response: The section listing management policies has been eliminated from the Master Plan outline and will no longer be used.

Page 8 - paragraph 4--The WRAC recommends that detailed inventories of flora and fauna be initiated for the planned properties of the project area in the near future. Additional credibility of the overall resource will be enhanced with this data.

DNR Response: Constraints on manpower and energy preclude specific inventories at this time. Whenever possible, observations will be made to complete the inventory of all species.

Page 9 - General Comment on p. 9--Since the proposed management of the project area involves only narrow stream corridors recommended silviculture practices will not be valid or practical. The only vegetative management needed could be the release of the stream bed from the choking canopy of tag alders. Elimination of erosion from fringes of the stream or tramping by livestock is essential.

DNR Response: A number of portions of the Fishery Area are from 1,000 to 3,000 feet wide. Forest Management personnel recommend the harvest of mature timber. Brushing will be accomplished where necessary.

Page 17 - last paragraph under H. Land Use Potential--The WRAC wishes to reiterate once again that single classification by the Bureau of Fisheries is poorly conceived and erroneous. It is true that a quality trout stream and its environs are a "thing of beauty" and often a classic natural area. There are occasionally some exceptional features of prime geological, ecological, vegetative, animal, hydrological, etc., interest that could be identified under natural or scientific area category. This could add additional charm to entice the user and to add stature to the project area. For instance, the Scientific Area inventory does not have a Class I trout stream on its designated list. We have bogs, fens, natural bridge, cave, lakes, all kinds of woods, river gorges etc., but no trout stream (designated as such).

DNR Response: Areas recommended as natural areas are not within the revised property boundaries on the North Branch, Embarrass River.

Page 19, item 7 - Floodplains--No mention is made in the text of the master plan regarding the threat of gravel operations within the floodplain of the planned managed streams. The toposheets post a number of gravel operations in stream vicinity of the project area. A statement regarding this threat may be a positive step to discourage any future contemplation of such act.

DNR Response: No gravel washing operations are found within the revised project boundary.

Page 22 next to the last paragraph bottom page--The WRAC agrees in part with the stated paragraph. The Council recommends sloughing all management suggested except the pertinent sentence--"The project goal is preservation and restoration of trout habitat." Amen.

DNR Response: The DNR is committed to multiple-use management. Most management on the Fishery Area will relate to preservation and restoration of trout habitat.

CORRESPONDENCE/MEMORANDUM

STATE OF WISCONSIN

Date: July 27, 1984

File Ref: 3600

To: C. D. Besadny

From: James T. Addis



Subject: Proposal to Establish North Branch Embarrass River Fishery Area

Subsequent to direction received from the Natural Resources Board March 24, 1980 to proceed with an Environmental Impact Statement relating to the establishment of the North Branch Embarrass River Fishery Area, the Department has done so in accordance with the requirements of WEPA. A public hearing was conducted May 8, 1984, and we now feel confident there is sufficient acceptance of this proposal to ensure its successful implementation.

The Department is proposing to establish a fishery area on the headwaters of the North Branch Embarrass River upstream from the Village of Bowler in northwestern Shawano County. The proposed fishery area includes 31 miles of stream, all of which is considered high quality (Class 1) brook trout habitat.

Acquisition of stream frontage rights would be by fishery management easement and would total 1,130 acres to 1,900 acres depending on the result of negotiations with individual landowners.

The North Branch Embarrass River Fishery Area would be established to preserve and restore the stream's wild trout fishery and natural environment and provide the public with quality trout fishing opportunities. Other public benefits would include opportunities for compatible recreation such as hiking and nature study. Recreation would be restricted to nonmotorized day uses. The area would not be open to public hunting and camping.

Board approval of the North Branch Embarrass River Fishery Area, Shawano County, Master Plan Concept Element will constitute approval to establish this fishery area.

Your assistance in bringing this proposal before the Board will be sincerely appreciated.

RJP:mg

Form 1100-1
Rev. 11-82

NATURAL RESOURCES BOARD AGENDA ITEM

Item No. 6.B-4

SUBJECT: Establishment of the North Branch Embarrass River Fishery Area, Shawano County, and approval of conceptual master plan.

FOR August BOARD MEETING
(month)

TO BE PRESENTED BY: Jim Addis

SUMMARY:

The Concept Element of the Master Plan and Final Environmental Impact Statement for the North Branch Embarrass River Fishery Area, Shawano County, have been completed. Total costs associated with the property are estimated at:

Land Acquisition by Easement	\$750,000-\$1,500,000 (1,900 acres)
Habitat Improvement	
Brushing	\$3,000/mile
Instream Work	\$36,000/mile
Beaver Control	\$1,500 annually
Spring Pond Dredging	\$20,000-\$40,000 (\$1.00-\$2.00/yard)
Annual Habitat Maintenance	\$2,000

The Department proposes to establish and manage the property to preserve and restore the stream's wild trout fishery and natural environment and provide the public with quality trout fishing opportunities, as well as other compatible recreation opportunities. The area would not be open to public hunting and camping. Public support for this approval is favorable.

RECOMMENDATION:

That the Natural Resources Board establish the North Branch Embarrass River Fishery Area in Shawano County and approve the Concept Element of the Master Plan, for acquisition, development and management. This recommendation is based on the attached Record of Decision drafted by staff. If the Board approves the recommendation, the Record of Decision will be finalized and distributed for public information.

LIST OF ATTACHED REFERENCE MATERIAL:

- No Fiscal Estimate Required
- No Environmental Assessment or Impact Statement Required
- No Background Memo

- Yes Attached
- Yes Attached
- Yes Attached

cc: Judy Scullion - ADM/5
James Addis - FM/4
Hal Schwenn - FM/4
Vern Hacker - Oshkosh
Charles Higgs - LMD
Ron Nicotera - ER/4

APPROVED:

T. Addis
Bureau Director

7/27/89
Date

Craig L. Kern
Administrator

8/10/89
Date

AD Jesalmy
Secretary

8-15-89
Date

DEPARTMENT OF NATURAL RESOURCES
ESTABLISHMENT OF THE NORTH BRANCH, EMBARRASS RIVER FISHERY AREA,
SHAWANO COUNTY, WISCONSIN
MASTER PLAN FOR EASEMENT ACQUISITION, DEVELOPMENT AND MANAGEMENT
RECORD OF DECISION AND FINDINGS OF FACT

Introduction

The Natural Resources Board pursuant to Section 23.09(2), Wis. Stats., and in accordance with Section 1.11, Wis. Stats., has established the North Branch, Embarrass River Fishery Area in Shawano County and approved the Master Plan. This Board action allows the Department, subject to gubernatorial approval, to begin the acquisition of easements and to implement development and management as described in the Master Plan.

On May 28, 1976, the Natural Resources Board granted preliminary approval for a remnant fish management land acquisition project on the Embarrass River system with an acreage goal of 1,000 acres. A subsequent Natural Resources Board Land and Business Committee Acquisition Progress Report dated February 10, 1977, identified the Shawano County Project (also known as the Embarrass River Project) as having "unique" lands important to future resource protection and suggested that the acreage goal be increased from 1,000 to 3,500 acres.

Informational public meetings about the proposed 1,000-acre remnant fishery area were held at Wittenberg and Bowler in May 1977. Public support of the proposed remnant fishery area was mixed; however, the Shawano County Board passed a resolution in support of the proposal.

A Department task force was appointed in November 1977 to complete the fishery area planning. The task force developed a concept plan that recommended the 1,000-acre goal be expanded to 3,500 acres and these lands be selected from within a 10,000-acre boundary drawn along the Embarrass River system's best trout streams. Specific lands to be acquired were not designated. It was proposed that properties be acquired from willing sellers on the best, first available lands within the boundary. This plan was circulated to various interested federal, state, and local agencies for review and comment in December 1979. Subsequent to this review the proposal was amended to be more specific. The amended proposal called for the acquisition of 3,500 acres along the North Branch, Embarrass River.

This North Branch, Embarrass River proposal was presented as a draft Master Plan to the Natural Resources Board in April 1980, for informational purposes. Copies of the draft Master Plan were circulated to the potentially interested federal, state and county officials, other organizations and citizens for review. The Department held an informational public meeting on the draft Master Plan in Bowler in October 1980.

The Draft Environmental Impact Statement (DEIS) was released for review in March 1982. A public informational meeting was held May 5, 1982 in Bowler to gather comments and concerns regarding the DEIS. There was substantial controversy primarily regarding the proposed land acquisition and public hunting.

As a result of public comments and reconsideration of resource protection and recreation needs, the Department revised the proposal to recommend the project be established to obtain fish/management easements on 1,900 or fewer acres. The revised Master Plan and the comments on the DEIS were addressed in the Final Environmental Impact Statement (FEIS) that was released in March 1984. A public hearing was held on the FEIS on May 8th regarding the easement proposal. Controversy was substantially less than with the earlier fee acquisition project.

With the FEIS hearing, the consideration of the EIS and associated records in the decision-making process, and this Record of Decision, the Department has completed its procedures under the Wisconsin Environmental Policy Act (WEPA), Section 1.11, Wis. Stats., and NR 150, Wisconsin Administrative Code. This compliance with WEPA will generally apply to all subsequent Department decisions that may be required whose impacts are considered in the EIS.

Besides publicly announcing the Department's decision, this document briefly describes the approved project, identifies the alternatives evaluated throughout the planning process and discusses the major factors considered in reaching the final decision.

Description of the Approved Project

The Department of Natural Resources will acquire the easement rights to 1,130 to 1,900 acres of land along 31 miles of the North Branch, Embarrass River and its tributaries upstream from the Village of Bowler in Shawano County for the establishment of a new fishery area. The exact acreage and terms of the easements will depend on negotiations with the individual landowners. All the streams are high quality (Class 1) trout water. Development and management are designed primarily for the protection and enhancement of this high quality trout fishery and to provide public access for fishing and nonconsumptive day use recreation, such as nature study and hiking. Preservation of the resource in a natural state will be emphasized with intensive management and development kept to a minimum.

Trout habitat improvement will primarily include a mix of stream channel alteration and brush removal to stabilize banks, increase fish cover and expose additional spawning areas. Work will be done on approximately 4 miles (13%) of stream. Other management activities will include dredging a 2.5-acre spring pond, removing an old man-made dam and beaver control.

Eight five-car parking lots will be constructed but other items like trails, sanitary facilities and trash containers will not be provided. Additionally, the area will not be open to public hunting or camping. Total costs associated with the project are estimated at from \$800,000 to \$1,700,000 which include annual maintenance costs of \$2,500.

Consideration of Alternatives
and Their Impacts

Several alternatives were identified and analyzed by the Department as it prepared the Master Plan for the North Branch, Embarrass River Fishery Area. If the Department were to take no action, the North Branch, Embarrass River would probably remain much the same for the foreseeable future. However, the long-term availability of public access and maintenance of this high quality resource would be uncertain.

The main concerns in analyzing the action alternatives were the potential trout productivity compared to the fish management costs, the amount of near-stream development, the potential for long-term maintenance of the fishery, especially the cold water supply, the ease of public access and the amount of agricultural land conversion.

The Middle and South Branches of the Embarrass River system were considered for fishery area development. Both branches have good fisheries similar in character to the North Branch. The South Branch would require a substantially greater investment in trout habitat improvement than would the North Branch. The Middle Branch, the largest of the three, has more critical water temperature fluctuations and more streamside development.

A "dispersed fishery area" concept was also considered. Under this proposal, the Department would acquire controlling rights to the best, first available nondeveloped trout stream frontage on all branches of the Embarrass River. This alternative would have provided public access and some degree of long-term protection to the trout fisheries of most of the Class I trout streams of the Embarrass River system. While this approach would have the above mentioned benefits it might not provide sufficient long-term protection to any particular stream's fishery and management would be difficult and costly.

Both larger and smaller fishery area alternatives were examined. The smaller alternative omitted Strassburg Creek, the North Branch Fishery Area's primary tributary. This deletion would not affect the viability of the remaining fishery area; however, Strassburg Creek does have good spawning success and supports a good fishery. The larger fishery area alternative revolved around either including the downstream section of the North Branch, which is Class II trout water, (some stocking of trout required), or acquiring some sections of the Middle or South Branches. The production potential and the long-term fishery protection benefits offered by either of these alternatives are considerably less than that of the selected fishery area.

Within the context of the approved project, the boundaries and method of land control changed significantly during the planning and environmental impact analysis process. The Master Plan evaluated in the Draft EIS called for fee title acquisition of 3,571 acres. The boundary was drawn along the upland and included the entire floodplain. This proposal would have provided a great deal of protection to the stream corridor and boundary maintenance would be easier. It would also have allowed public hunting and trapping on fishery area lands.

This 3,571-acre fee title proposal was revised to the approved 1,130 to 1,900-acre easement project because of high land acquisition costs, local citizen opposition to both public hunting and a large amount of fee acquisition, and a reassessment of the stream protection needs.

Conclusions

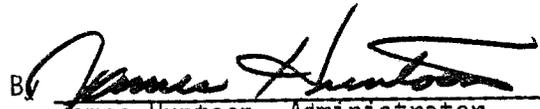
Based on the Goal and Objectives for the fishery area and the relative merits of the various alternatives evaluated throughout the planning process and public review, the Department finds the location and size of the approved North Branch project to be the most cost effective and environmentally sound. The Department also finds the acquisition, management and development described in the Master Plan suitable to accomplish the purposes of the approved fishery area project.

APPEAL RIGHT

If you believe you have a right to challenge this decision, you should know that Wisconsin statutes and administrative codes establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to ss. 227.15 and 227.16, Stats., you have 30 days after service of the decision to file your petition for review. The respondent in action for judicial review is the Department of Natural Resources. You may wish to seek legal counsel to determine your specific legal rights to challenge a decision. This notice is provided pursuant to s. 227.11(2), Stats.

Dated at Madison, Wisconsin, this 23rd day of October, 1984.

STATE OF WISCONSIN
Department of Natural Resources
For the Secretary

By 
James Huntton, Administrator
Division of Resource Management