

Scenic Roadway p-1 of 11 - app.
Train designer - rec. amending to consider scenic roadway

Form 1100-1
Rev. 10-77

Item 6B5 Minutes of _____

Approved subject to investigate allowing scenic roads

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
Madison, Wisconsin

ITEM RECOMMENDED FOR NATURAL RESOURCES BOARD AGENDA

TO THE SECRETARY: C. D. Besadny

Date December 14, 1981

FROM: James T. Addis

SUBJECT: Master Planning - - Approval of the Conceptual Master Plan for the Emmons Creek Fishery Area, Portage and Waupaca Counties.

1. To be presented at January, 1982 Board meeting by Vern Hacker.

2. Appearances requested by the public:

Name

Representing whom?

3. Reference materials to be used:

Memorandum dated December 14, 1981 from James T. Addis to C. D. Besadny, Emmons Creek Fishery Area, Portage and Waupaca Counties Master Plan.

4. Summary:

The final draft of the Conceptual Master Plan for this property has been prepared and is presented for review and approval. The task force proposes to expand the boundary, and to increase the acreage goal by 224.0 acres which will be subtracted from the Adams County Remnant Acreage Goal. The present approved acreage goal is 1,418.85 acres of which 1,043.75 acres have been acquired in fee title, leaving 375.1 acres yet to be acquired. If the proposed acreage goal expansion is approved, the new acreage goal will be 1,642.85 acres.

5. Recommendation:

That the Master Plan be approved.

APPROVED:

James R. Huntton 1/5/82
James R. Huntton, Administrator Date

A. C. Damon
A. C. Damon, Deputy Secretary Date

C. D. Besadny
Secretary, C. D. Besadny Date

- cc-Judy Scullion-ADM/5
- Ron Nicotera -ADM/5
- John Brasch - Rhinelander
- Charles Higgs-Green Bay
- Carl Evert - RE/4
- C. W. Threinen- FM/4
- Vern Hacker - Oshkosh

Signed:

James T. Addis
James T. Addis, Director
Bureau of Fish Management

CORRESPONDENCE/MEMORANDUM

STATE OF WISCONSIN

DNR Central Offices - Madison

Date: December 14, 1981

File Ref: 2100

To: C. D. Besadny

From: James T. Addis



Subject: Emmons Creek Fishery Area, Portage and Waupaca Counties Master Plan

Attached are the Conceptual Master Plan and the Environmental Assessment Screening Worksheet for the Emmons Creek Fishery Area, Portage and Waupaca Counties. A public meeting regarding the master plan was held at the Waupaca County Courthouse on April 13, 1981. Ten members of the public and five DNR personnel attended the meeting, which was friendly and supportive. No changes to the draft of the master plan were needed as a result of the meeting. The EASW was available for public scrutiny and has been approved by the Director, Bureau of Environmental Impact.

The master plan was supplied to the various internal bureaus and other interested parties for comment during the 45 day review period. Comments from internal bureaus were considered, and revisions made where appropriate. Comments from outside reviewing agencies and DNR responses, where appropriate are shown in the appendix attached to the master plan.

The Emmons Creek Fishery Area Task Force recommends that the approved boundary be expanded by 224.0 acres. The expansion would include 126.0 acres surrounding Fountain Lake, Portage County, the headwaters of Emmons Creek, 40 state-owned acres presently outside of the boundary and an attached 60 private acres, while it is recommended that 2.0 acres on a heavily developed property presently within the boundary be excluded.

The present approved acreage goal is 1,418.85 acres, of which 1,043.75 acres have been acquired in fee title, with 375.1 acres yet to be acquired. If the recommended expansion is approved, the new acreage goal will be 1,642.85 acres, with 1,083.75 acres having been acquired in fee title, leaving 559.1 acres to be acquired. The recommended change of 224.0 acres in the acreage goal will be subtracted from the Adams County Remnant Acreage goal if it is approved.

The master plan also recommends intensive instream habitat development on approximately five miles of stream. Because the coldwater (trout) research headquarters building is located directly on Emmons Creek, the development will serve as a major demonstration area for trout researchers from other states, and for trout anglers. Development will start on present state-owned lands. As other properties are acquired, habitat management will take place where needed.

Wildlife Management will be directed toward forest wildlife species by altering the ages of lowland brush with small clearcuts. Scattered plantings of upland shrubs and conifers will take place on 3-5 acre plots to increase the amount of edge. Approximately 345 acres of various aged oaks will be managed for maximum deer tree density and maximum acorn production.

Forest Management will consist of the best silvicultural and aesthetic techniques to protect the watershed. Pine plantations will be thinned, to maintain their health and growth rate while seedlings will be planted in critical areas to enhance water quality and provide additional and varied wildlife habitat.

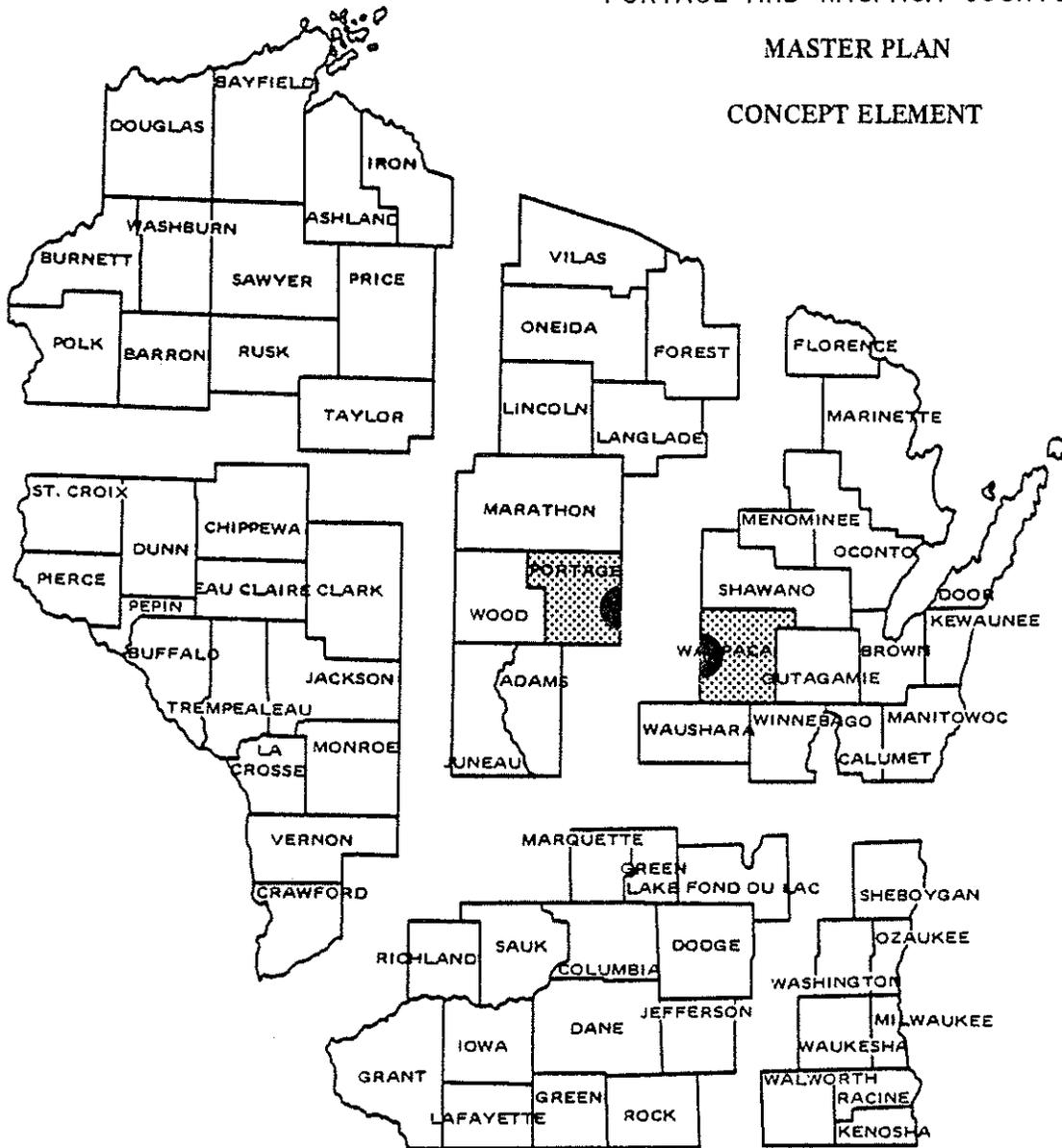
Increased parking facilities are proposed with seven small parking areas holding 5-10 cars, at a cost of \$300-\$1,000 each, dependent on the work required. The areas would be of crushed rock and would be capable of eliminating the present off-road parking.

Your approval is requested to submit the master plan to the Natural Resources Board at the January, 1982 meeting.

VAH:aep

cc - Judy Scullion - ADM/5
Ron Nicotera - ADM/5
John Brasch - Rhinelander
Charles Higgs - Green Bay
C. W. Threinen - FM/4
Carl Evert - RE/4
Vern Hacker - Oshkosh

EMMONS CREEK FISHERY AREA
 PORTAGE AND WAUPACA COUNTIES
 MASTER PLAN
 CONCEPT ELEMENT

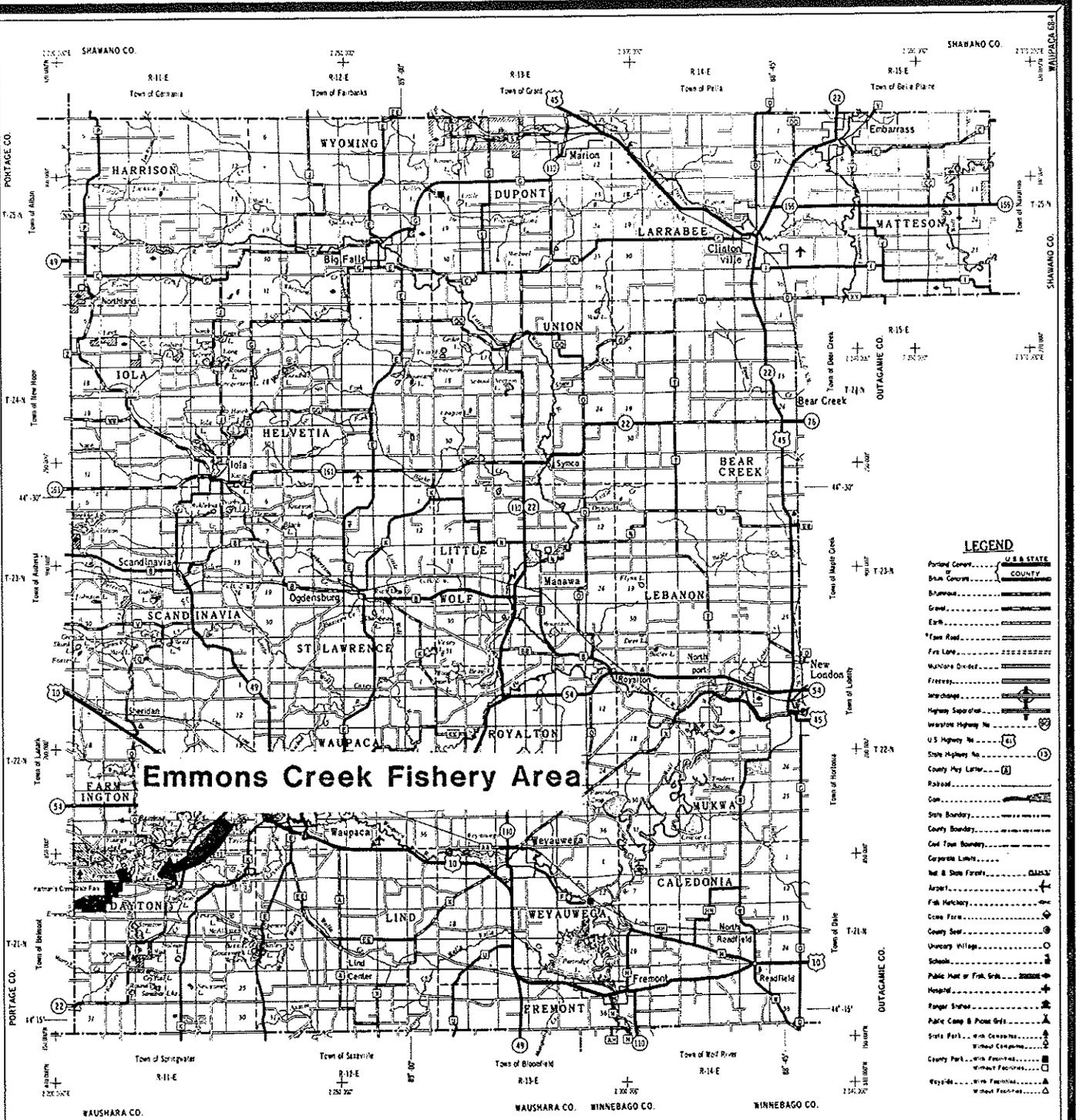


Property Task Force

Approved by Natural Resources Board

Leader - SCOT IRONSIDE, FISH MANAGER
 BOB HUNT, COLD WATER RESEARCH LEADER
 PAUL J. LOCHNER, FORESTER
 MIKE PRIMISING, FISH MANAGER
 BRUCE GRUTHOFF, WILDLIFE MANAGER

_____ Date



- LEGEND**
- Portland Concrete U.S. & STATE
 - Drum Concrete COUNTY
 - Gravel
 - Earth
 - Team Road
 - Fire Lane
 - Municipal Divided
 - Freeway
 - Interchange
 - Highway Separation
 - Interstate Highway No.
 - U.S. Highway No.
 - State Highway No.
 - County Hwy. Letter
 - Railroad
 - Canal
 - State Boundary
 - County Boundary
 - Civil Town Boundary
 - Corporate Limits
 - Nat. & State Forest
 - Airport
 - Fish Hatchery
 - Cow Farm
 - County Seat
 - University Village
 - School
 - Public Hall or Park Site
 - Hospital
 - Pumper Station
 - Public Camp & Picnic Site
 - State Park - with Campground
 - County Park - with Campground
 - County Park - without Campground
 - Keyhole - with Foundation
 - Keyhole - without Foundation

Figure 1b. Location - Emmons Creek Fishery Area, Waupaca County

CIVIL TOWNS

HARRISON	WYOMING	DUPONT	LARRABEE	MATTESON
IOLA	HELVETIA	UNION	BEAR CREEK	
SCANDINAVIA	ST. LAWRENCE	LITTLE WOLF	LEBANON	
FARMINGTON	WAUPACA	ROYALTON	MUKWA	
DAYTON	LIND	WEYAUWEGA	CALEDONIA	
		FREMONT		

STATES OF HIGHWAY 95 of Imp. I, 1977

STATE	164
COUNTY	34
LOCAL ROADS	178
OTHER ROADS	4
TOTAL FOR COUNTY	380

County Seat: Waupaca
Population: 7,264
Area: 755.54 sq. mi.

TOWNSHIP NUMBERS

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30
31	32	33	34	35
36	37	38	39	40



WAUPACA CO.
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STATE OFFICE BUILDING
Waupaca, Wisconsin
SCALE 1" = 2 MILES
Correct to
JAN. 1978
Copyright © U.S. G.S. Quadrangle
Based on Aerial Photographs

TABLE OF CONTENTS

	<u>Pages</u>
SECTION I - ACTIONS	
Goal and Objectives	1
Recommended Management and Development Program	1
SECTION II - SUPPORT DATA	
Background Information	7
Resource Capabilities and Inventory	8
Resource Management Problems	14
Recreation Needs and Justifications	14
Analysis of Alternatives	15
APPENDIX	16

SECTION I - ACTIONS
GOALS, OBJECTIVES AND ADDITIONAL BENEFITS

Goals

To manage the Emmons Creek Fishery Area in Portage and Waupaca Counties for public trout fishing primarily, plus other compatible recreational activities that are consistent with maintaining an aesthetically pleasing area.

Annual Objectives

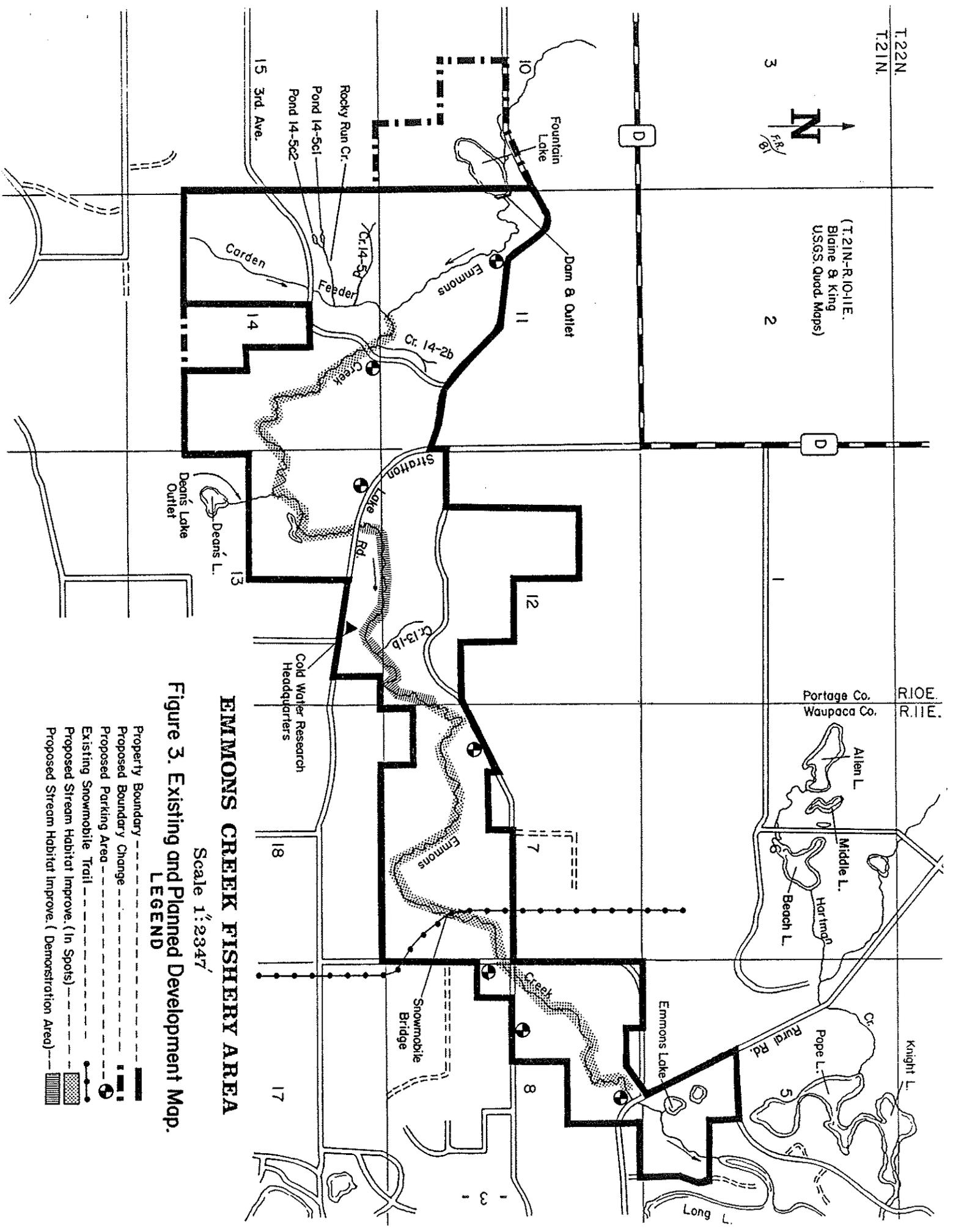
1. Provide opportunities for 4,785 angler days of trout fishing.
2. Provide opportunities for 1,550 participant days of hunting and trapping.
3. Manage timberlands to provide an allowable cut of 60 cords of roundwood products.

Annual Additional Benefits

1. Provide 450 user-days of other recreational activities, including sightseeing, berry and mushroom picking, photography, swimming, picnicking, hiking and cross-country skiing.
2. Contribute to the habitat of migratory or future resident species determined to be endangered and/or threatened species.
3. Benefit resident or migrant nongame species.

RECOMMENDED MANAGEMENT AND DEVELOPMENT PROGRAM

The recommended management program for the Emmons Creek Fishery Area in Portage and Waupaca Counties (Figures 1 and 2) will be the implementation of intensive trout habitat development including a demonstration area (Figure 3). The downstream point of the habitat development will be at the Rural Road bridge crossing, continuing upstream approximately 5 miles to the confluence with Carden Feeder tributary. The demonstration area will be within the intensive habitat development area but will consist of a wide variety of stream habitat improvement techniques. The downstream point of the demonstration area will be from the county line continuing upstream approximately one mile to the Stratton Lake Road bridge crossing. The demonstration area will be developed and used as examples of various habitat improvement techniques primarily by personnel from the Department of Natural Resources Cold Water Research Headquarters located approximately midway through the demonstration area along Stratton Lake Road. The close proximity of the demonstration area will allow personnel from the Cold Water Research Headquarters a convenient means of conducting tours while providing excellent examples of a variety of habitat improvement techniques (Figure 3).



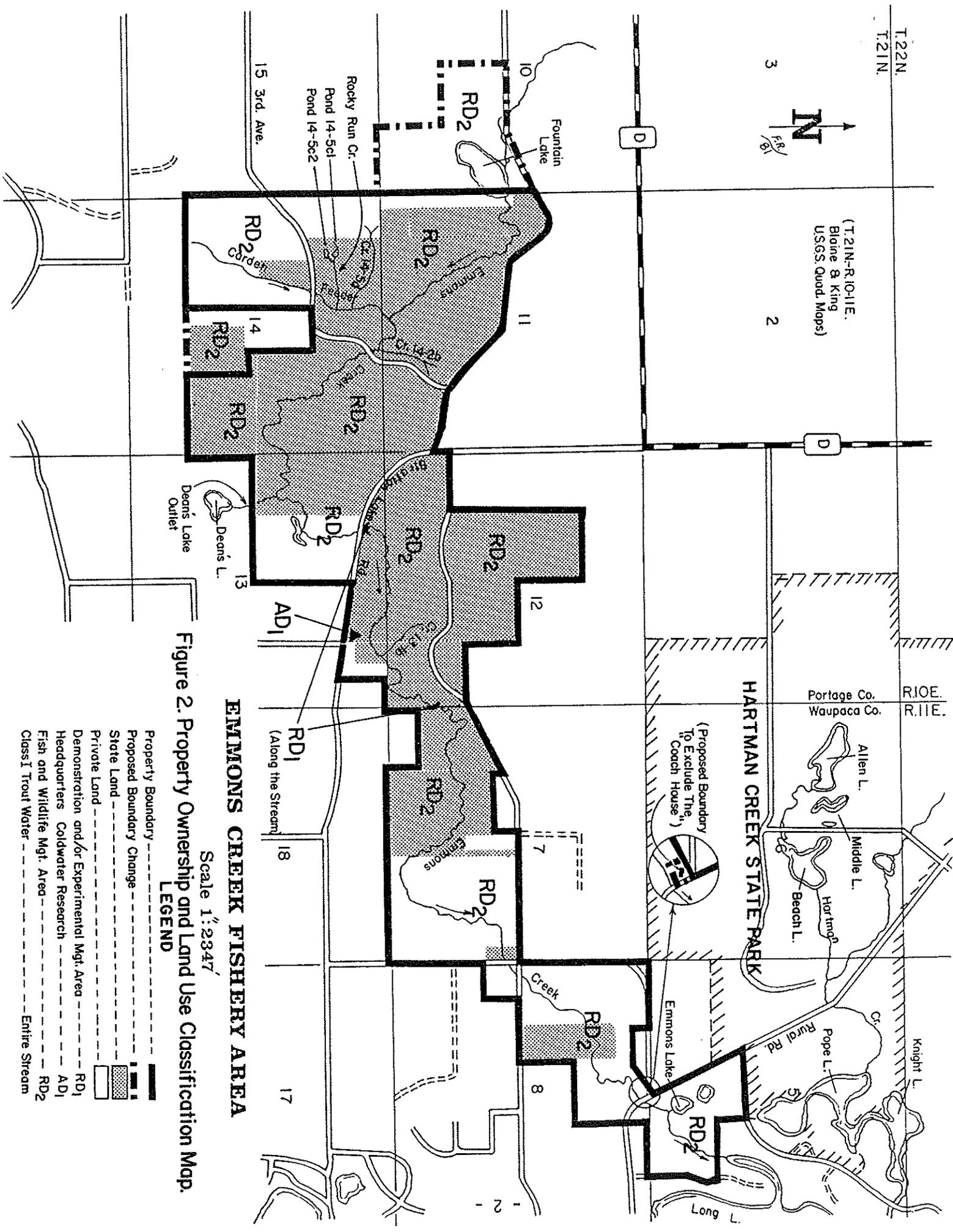
EMMONS CREEK FISHERY AREA

Scale 1"=2347'

Figure 3. Existing and Planned Development Map.

LEGEND

- Property Boundary ————
- Proposed Boundary Change - - - - -
- Proposed Parking Area - - - - -
- Existing Snowmobile Trail - - - - -
- Proposed Stream Habitat Improve. (In Spots) - - - - -
- Proposed Stream Habitat Improve. (Demonstration Area) - - - - -



(T.21N-R.10-E.
Blaine & King
USGS. Quad Maps)

R.10E.
R.11E.
Portage Co.
Waupaca Co.
Allen L.
Middle L.
Hartman
Beach L.
Knight L.
Pope L.
Rural Rd.
Emmons Lake
Long L.

HARTMAN CREEK STATE PARK

(Proposed Boundary
To Exclude The
"Coach House")

EMMONS CREEK FISHERY AREA

Scale 1":2347'

Figure 2. Property Ownership and Land Use Classification Map.

LEGEND

- Property Boundary ————
- Proposed Boundary Change - - - - -
- State Land ————
- Private Land ————
- Demonstration and/or Experimental Mgt. Area ————
- Headquarters Coldwater Research ————
- Fish and Wildlife Mgt. Area ————
- Class I Trout Water ————
- Entire Stream ————
- RD1
- RD2
- AD1

The cost of habitat development is estimated at \$74,800. The estimate was determined by assuming the development would involve approximately 1/3 of the lineal footage of stream and would cost approximately \$8.50 per foot (average 1981 costs) throughout the 5-mile area of improvement.

The habitat development should begin on those lands already owned by the Department as soon as plan approvals, money, manpower and supervision are available. Intensive improvement should be expanded to include the presently private lands recommended for purchase as soon as they are under State ownership. The development of habitat improvement on any portion of the stream should include the creation of nearby parking facilities and posting of signs to accommodate the anticipated increased fishing pressure following improvement.

Wildlife Management should be directed toward forest wildlife species such as white-tailed deer, squirrels, raccoons, other cavity dependent species and woodcock. Approximately 115 acres of lowland brush are now present. The value of this particular covertype can be greatly improved by altering the ages of each stand through a series of small clear-cuts. If done in a staggered manner there would always then be a certain portion of the lowland brush at the optimum age level for such species as cottontail rabbit and woodcock. Clear-cutting small patches of brush next to the stream will also dovetail nicely with trout management. Where possible, the individual stand of brush should also be allowed to increase in size by encroaching into adjoining agricultural fields now being sharecropped.

About 40 acres of upland brush now exist. This total amount can be increased by allowing natural succession to take place, thereby allowing encroachment and also by supplemental planting of such species as silky dogwood and hazelbrush.

Two hundred and twenty-eight acres of open uplands would lend themselves to scattered plantings of upland shrubs and conifers. The plantings should be intermixed in species composition and should range in size from 3 to 5 acres. This should be done in patchwork pattern and the unaltered openings should be allowed to succeed naturally or small grain farming could be continued. The end result of breaking up the larger fields would be a great increase in the amount of edge.

Finally, 345 acres of various aged oaks can be managed for maximum deer tree density and maximum acorn production. This would involve silvicultural techniques that preserve the cull tree wherever possible, while at the same time, prescribing the optimum basal area for acorn production.

Vegetative cover types will be managed consistent with the best silvicultural and aesthetic techniques. Management of the present timber stands will include maintaining the present species composition and where necessary, to increase the ability of the stand to protect the watershed. Pine plantations will be thinned to maintain their health and growth rate. Seedlings will be planted in critical areas to enhance water quality and to provide additional and varied wildlife habitat. This will be done mostly in the grass, field, upland brush and oak vegetative cover types.

Increased parking facilities are required in order to accommodate the anticipated increase in recreational use of the area. Seven small parking lots with a 5-10 car parking capacity, with crushed rock surface, are proposed. Each parking lot will be located just off an existing town road so as to minimize adverse impacts upon aesthetics and wildlife. Prior to development of the parking lots, surveys will be conducted at each site to determine if endangered plants or animals are present. Surveys will also be conducted to determine if any significant historical, architectural or archaeological sites will be jeopardized by the construction or presence of the parking lot. If the surveys determine significant historical, architectural, archaeological or endangered species are present, appropriate protective measures will be taken. The location of each parking lot is shown on Figure 3.

The State Historical Society has determined that prehistoric Indian burial mounds are located within the NW 1/4 NE 1/4 of Section 8, T21N, R11E, Waupaca County. The proposed downstream-most parking lot located at the Rural Road Bridge crossing is within the 40 acres containing the Indian mounds. It is particularly important that a thorough survey be conducted at this site before construction is initiated.

The parking lots must be located on State-owned land and could be developed as soon as funding and ownership are available. The development of the parking lots should precede the development of nearby stream improvement work in order to accommodate the anticipated increased fishing pressure and provide convenient access and parking during construction of the stream improvement project.

The cost of each parking lot is roughly estimated at \$300 - \$1,000 totaling \$2,100 - \$7,000 for the seven lots. Costs will vary depending on how much clearing, fill and crushed rock are required.

A complete biological inventory of the property will be conducted as funds permit. Additional property objectives may be developed following completion of such an inventory.

A total of 375.1 acres remain to be acquired of the approved acreage goal of 1,418.85 acres. That acquisition is necessary to accomplish the stated goals and objectives in providing for quality recreational opportunities for the future. Acquisition of these parcels containing stream frontage are of top priority and should be purchased as soon as they become available so that stream habitat development can begin. If there is no opportunity for fee purchase, 4-10 rod easements on each bank should be considered as an alternative.

It is recommended that the acquisition boundary be expanded to include two additional parcels totaling 186 acres, and that a 2-acre parcel be deleted from the approved boundary. The changes recommended include:

1. Expanding the boundary to include 126 acres surrounding Fountain Lake, the headwaters of Emmons Creek. The lake is deep (23 feet) for its relatively small size (15.4 acres). Numerous springs along the shoreline supply

crystal-clear water of exceptionally high quality to the lake. A state-owned, hard-surfaced boat landing is located on the north end of the lake. In addition to the springs, wildflowers and a variety of wildlife and large white pines are present on this premium property.

Acquisition of the Fountain Lake area should be considered the highest priority and should be purchased as soon as possible because of the likelihood of the area being subdivided. There has been a previous attempt to purchase the area for a subdivision, but it failed when zoning variances for reduced size lots could not be obtained. Subdivision on the steeply sloping shoreline would destroy the unique aesthetics and jeopardize the springs and water quality in the lake, and downstream on the Emmons. Acquiring Fountain Lake will eliminate the future possibility of subdivision and guarantee preservation of water quality of the Emmons Creek Fishery Area.

The 126-acre area would be managed to allow the natural, physical and biological processes to operate with minimum human intervention. Future management of the lake will include allowing the dam to remain as long as it is in good condition and if there are no secondary adverse environmental impacts associated with it. The dam on the outlet of the lake is presently holding a 5-foot head of water. If, in future years, there is evidence that the dam is causing a warming of the stream or other detrimental effects, the dam should be removed and Fountain Lake will revert back to a large spring pond. Presently, there is no evidence of excessive warming or cooling, as numerous springs below the Fountain Lake Dam and along the entire length of the creek are responsible for consistently maintaining excellent water temperatures for trout. When maintenance or replacement of the dam becomes necessary, the cost versus benefits will have to be determined and evaluated.

2. It is also recommended that the fishery area boundary be expanded to include an additional 100 acres in Section 14, T21N, R10E, Portage County (Figure 2), of which 40 acres are already state owned. Inclusion of the 100 acres would create a consistently uniform southern boundary across Section 14. A consistent boundary will be much easier for the public to locate and will help prevent unintentional trespass onto private land. The area is valuable for wildlife because the variety of habitat is creating a large degree of edge. Including the 40 acres already owned within the acquisition boundary will secure state ownership. The 100-acre parcel consists of agricultural fields, upland brush, scrub oak and grass, and acquisition should begin as soon as the present landowners are willing to sell and funds are available.
3. One additional change proposed is the removal and exclusion of 2 acres containing an historic building called "The Coachhouse" from within the boundary. This building is located in the NW 1/4 NW 1/4 NE 1/4 of Section 8, T21N, R11E. The exclusion does not include Emmons Creek and a buffer zone of approximately 2 rods along the north bank of the stream (Figure 2).

If the changes recommended in this master plan are approved by the Natural Resources Board, the acreage goal for the Fishery Area will be modified as follows:

Present approved acreage goal	:	1,418.85 acres
Add Fountain Lake property	:	126.0 acres
Add state-owned property out of boundary	:	40.0 acres
Add property in S14, T21N, R10E	:	60.0 acres
Exclude Coachhouse property	:	<u>- 2.0 acres</u>
New Acreage Goal	:	1,642.85 acres

SECTION II - SUPPORT DATA BACKGROUND INFORMATION

Emmons Creek is one of the finest trout streams in central Wisconsin. The beauty of this stream and its surrounding lands goes unchallenged. The crystal clear waters support a trout population that sustains itself through natural reproduction. The stream is unique in that large brown trout from the Waupaca Chain O'Lakes swim its waters in an annual fall spawning migration that carries them into its upper reaches and then returns them to the lakes.

The fishery area offers year-round recreation for anglers, hunters and nature lovers who walk its abundant fields and forests. Emmons Creek is undeveloped and natural looking and thus "naturalness" is one of its greatest qualities. It is an island of "wilderness" surrounded by rapidly growing communities, sprawling housing developments, and expanding agricultural interests that are gradually using up our remaining wild lands.

As the years pass, people from Wisconsin will come to love and respect this small natural place for the fish and wildlife resources it produces and the feeling of peace and solitude it offers by allowing a person to walk its streambanks or sit in its cool, green forests.

The Emmons Creek Fishery Area is located in southeastern Portage County and southwestern Waupaca County. The headwaters are formed by the outlet on Fountain Lake, the Carden Feeder and its Rocky Run Creek tributary and numerous springs. The Emmons follows a winding course of 6.22 miles through predominantly forested areas before entering the Chain O'Lakes in Waupaca County, a part of the Wolf-Fox River watershed in the Lake Michigan drainage. The entire length of stream is Class I brown and brook trout water. Emmons Creek is unusual in that it supports an annual fall spawning run of brown trout that are residents of the Chain O'Lakes. No trout have been stocked in this Class I stream since 1954.

In 1957, the State of Wisconsin, through authority of the Wisconsin Conservation Department under Chapter 23.09 of the Wisconsin Statutes and with federal aid from the Fish and Wildlife Restoration Acts initiated a land acquisition program. The primary purpose was to insure public access to the waterway and provide land for outdoor recreation. In 1958, the property

boundaries and funding were approved by the Wisconsin Conservation Commission, the predecessor of the Natural Resources Board, under the Dingell-Johnson Act with an acreage goal of 1,611.08. Since 1967, acquisition has been accomplished with ORAP 200 funds. In 1967, the acreage goal was reduced to the present 1,418.85. In 1972, a management plan for the 643 acres owned by the state at that time was developed by a Department of Natural Resources committee. The Multiple Management Proposal for the Emmons Creek Fish and Wildlife Area basically called for preservation of the area in as natural a condition as possible. The Multiple Management Proposal concept has been abandoned by the Department in favor of Master Planning. At the present time, 1,043.75 acres are owned in fee title within the boundary. There are presently no easements held by the state.

RESOURCE CAPABILITIES AND INVENTORY

Soils, Geology and Hydrology

Bedrock in the Emmons Creek area consists of Precambrian crystalline rock, primarily granite. The granite bedrock forms a broad, flat plain underlying the area. The granite bedrock in the Emmons Creek area is covered with upper Cambrian sandstone and thick deposits of drift material. The hilly topography is created by a glacial moraine which resulted from various Wisconsin glacial stages. The moraine areas contain numerous kettles formed by buried blocks of ice which melted to create the small natural lakes such as Fountain Lake. The drainage patterns were formed by the melting glacial ice and generally run west to east.

Soils in the Emmons Creek area are classified as Mecan and Wycena loamy sand and sandy loam; and Plainfield and Gotham loamy sand and sand. These are only moderately productive agricultural soils and are derived mostly from noncalcareous glacial sediments. The sandy soils have a rapid permeability and are generally well drained. The rapid permeability of the sandy soils and extensive vegetative cover account for relatively infrequent flooding.

Precipitation averages 31.4 inches annually in the watershed and is usually adequate for agricultural needs, but irrigation is a widespread practice by cash crop growers in the surrounding area.

Fish and Wildlife

The fish species composition in Emmons Creek is characteristic of a cold water fishery. Management through stream improvement is directed primarily at the native brown and brook trout populations. The entire aquatic community will also benefit from improvement due to the increased diversity of insect and invertebrate communities. Brown trout are abundant throughout the entire length of stream and average 507 per acre with a range of 285 to 1,518 per acre. Brook trout are present in sparse numbers except for the upper mile and feeder tributaries where their density is slightly higher, on the order of 26 per acre. Trout have not been stocked in Emmons Creek since 1954. Lack of instream cover is the key limiting factor affecting the trout populations.

The fishery is unusual in that a resident population of large brown trout in the Chain of Lakes makes an annual fall spawning run up Emmons Creek. There is a verified report of a 27-inch brown trout tagged in Long Lake being recaptured 6 days later in Emmons Creek approximately 1 mile from Fountain Lake. Other species documented at present in the stream are mottled sculpin, white sucker, common shiner, and brook stickleback. Warmwater species found near lakes include bluegill, rock bass, northern pike, largemouth and smallmouth bass. The Michigan brook lamprey is also found occasionally.

Creel census surveys have shown that present fishing pressure on Emmons Creek is approximately 550 angler days/mile of stream. Present fishing pressure is calculated to be approximately 3,420 angler days when it is projected to cover the entire 6.22 miles of stream. Fishing pressure is anticipated to increase to approximately 4,785 angler days/year upon implementation of habitat improvement as identified in the master plan.

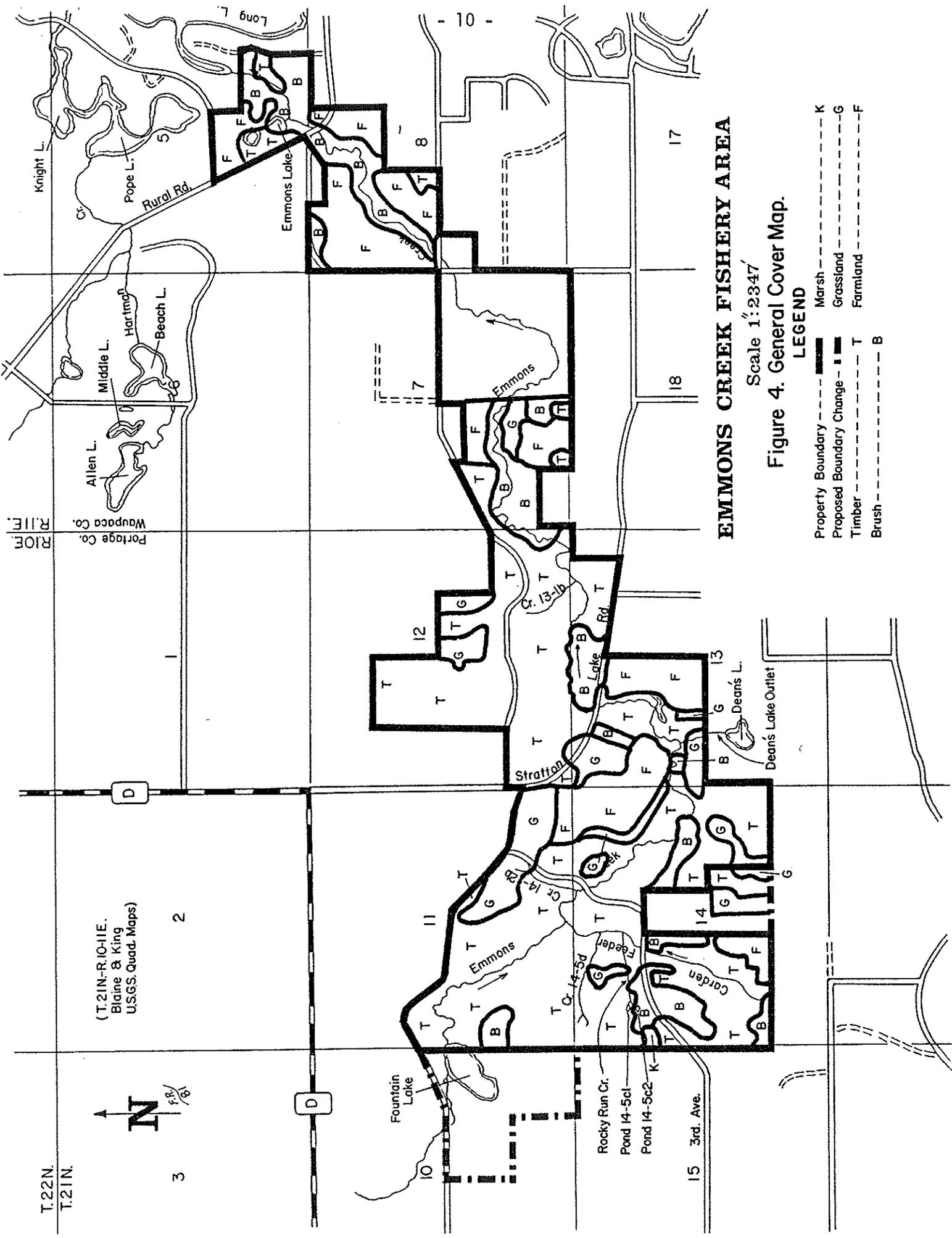
Presently, approximately 1,165 participant days of hunting and trapping occur on the property. This is expected to increase to 1,550 participant days, upon acquisition of the remaining 395.1 acres. If the acreage goal is enlarged to include the 184 acres recommended, as many as 1,750 participant days of hunting and trapping could result.

A variety of birds and animals inhabit the property area both seasonally and permanently. Wildlife management will be directed toward creating a diversity of habitat types, thereby creating a large edge factor which will provide suitable habitat for both game and non-game species. Wildlife species which will particularly benefit will be white tailed deer, gray squirrel, cottontail rabbit, ruffed grouse and woodcock. The property presently receives very heavy deer hunting pressure during both bow and gun seasons.

Put and take pheasant stocking has been conducted on the Emmons Creek property in the past. It is recommended that the pheasant stocking program be discontinued due to the artificial nature of the program and poor carry-over of the birds surviving the hunting season. The dominant habitat types available are not conducive to pheasants.

Vegetative Cover

The forest vegetation is generally composed of stands of black and white oak, swamp hardwoods and red pine plantations. Interspersed among the forest vegetation are openings of grass, upland and lowland brush and agricultural fields (see Figure 4). A reconnaissance of the vegetation was completed in January 1980 and is shown in Table 1. The forest reconnaissance identifies the present timber and other vegetative conditions and assists in preparing the future management prescription for the area.



EMMONS CREEK FISHERY AREA

Scale 1":2347'

Figure 4. General Cover Map.

LEGEND

- Property Boundary - - - - - K
- Proposed Boundary Change - - - - - G
- Timber - - - - - T
- Brush - - - - - B
- Marsh - - - - - K
- Grassland - - - - - G
- Farmland - - - - - F

(T.21N.-R.10-11E.
Blaine & King
USGS Quad. Maps)



T.22N.
T.21N.

3

2

10

11

12

7

8

15

14

13

18

17

- 10 -

Table 1 - Timber types on state-owned tracts of the Emmons Creek Fishery Area, as determined by reconnaissance survey.

<u>Types</u>	<u>Acres</u>
Swamp hardwoods sawtimber	57
Swamp hardwood poles	136
Oak sawtimber	132
Oak poles	121
Oak saplings	77
Bottomland hardwoods sawtimber	7
Swamp conifer poles	2
Swamp conifer saplings	2
Fir-spruce saplings	13
White pine sawtimber	11
White pine poles	5
White pine saplings	3
Red pine sawtimber	7
Red pine poles	76
Jack pine poles	3
Jack pine saplings	5
Open upland	228
Upland brush	40
Lowland brush	115
Other	4
TOTAL	1,044

The annual growth of the forest vegetation ranges from 0.33 cords/acre/year for the hardwoods to 1.0 cords/acre/year for the red pine. The growth rate will improve as management is applied to the various stands.

Sharecropping occurs in the cultivated areas. It should continue as long as it is consistent with the management objectives and benefits wildlife.

Endangered and Threatened Species

No endangered or threatened species of fish, wildlife, plants, mollusks, reptiles or amphibians are known to exist on the property. All areas of development will be examined for the presence or absence of endangered and threatened species of wild animals and plants. If listed species are found, development will be suspended until the District Endangered and Nongame Species Coordinator is consulted, the site evaluated, and appropriate protective measures taken for significant locations.

Water Resources

Emmons Creek originates in the southeastern corner of Portage County and flows easterly 6.22 miles before entering the Chain O'Lakes in Waupaca County. Its main water sources are Fountain Lake, the Carden Feeder tributary, several small streams and spring ponds, and numerous springs throughout the entire length of stream. All streams within the Emmons Creek Fishery Area are Class I brown and brook trout water.

Emmons Creek has clear, alkaline (pH 8.2) and very hard water with a total alkalinity reading of 183-186 ppm, CaCO₃. Its specific conductance ranges from 351-375 umhos/cm at 77°F. Sand is the primary bottom material with gravel and rubble also present. Caddisflies and freshwater shrimp are abundant and stoneflies and mayflies are also common sources of trout food in the stream. Lack of instream cover is a trout limiting factor, although some is present in the form of boulders, undercut banks, fallen logs and aquatic vegetation.

Table 2a shows that in addition to Emmons Creek, seven other feeders, small tributaries, and spring ponds are present on the fishery area. Combined, they total 8.64 miles of stream and 14.07 acres. All are Class I trout waters. Table 2b indicates that Fountain Lake, at 15.4 acres is the key property if the proposed expanded boundary is approved.

Table 2a - Water areas within the property boundary of the Emmons Creek Fishery Area.

Name	County	Class Trout Water	Length in Miles	Surface Acres	Depth (Feet)
Dean's Lake Outlet	Portage	I	0.12	0.18	
Carden Feeder	Portage	I	1.55	0.60	
Emmons Creek	Portage	I	3.92	7.53	
Emmons Creek	Waupaca	I	2.30	5.02	
Rocky Run Creek	Portage	I	0.33	0.27	
Creek 13-1b	Portage	I	0.13	0.16	
Creek 14-5d	Portage	I	0.29	0.11	
Pond 14-5c1	Portage	I		0.10	1
Pond 14-5c2	Portage	I		0.10	1
Totals				8.64	14.07

Table 2b - Water areas within proposed expanded boundary of the Emmons Creek Fishery Area.

Name	County	Class	Length in Miles	Surface Acres	Depth (Feet)
Fountain Lake	Portage			15.4	23

Historical and Archaeological Features

No systematic architectural, archaeological or historical surveys have been conducted in this portion of Wisconsin. Thus, information regarding the

area's cultural resources is limited. The State Historical Society indicates that a group of prehistoric burial mounds exist within the boundary in the NW 1/4 NE 1/4 of Section 8, T21N, R11E and further indicated that, "it is almost certain that there are many more prehistoric sites within the boundaries of the Fishery Area". Surveys coordinated with the State Historical Society will be conducted at each site prior to any movement of soils or structures to identify any significant architectural, historical or archaeological sites and determine if the proposed development will cause an adverse effect. If development threatens any significant sites, appropriate protective measures will be taken.

Land Use Potential

The majority of the Emmons Creek Fishery Area is best suited for classification as a Resource Development Area because of its size, location and recreational use. As a Resource Development Area, the classification should be further broken down into 2 sub-categories. The Land Use Classification Map (Figure 2) illustrates the classification boundaries.

Demonstration Management Area (RD)

The demonstration management classification will be applied to approximately one mile of stream from the county line upstream to the Stratton Lake Road bridge crossing. A variety of stream improvement techniques will be developed for demonstration purposes. The demonstration project will be developed in conjunction with the DNR Headquarters for Cold Water Research, located at Emmons Creek.

Establishing a demonstration area showing various methods of intensive habitat development will be compatible with overall objectives of the Fishery Area.

Fisheries and Wildlife Management Area (RD)

All acreage within the Emmons Creek Fishery Area not designated otherwise shall be classified as a Fisheries and Wildlife Management Area (RD). The physical and biological features of the area and its potential for resource development and heavy recreational and educational use, result in this appropriate classification.

Administrative (AD) Category

The single exception to the Resource Development classification is a 4 acre tract surrounding the Department of Natural Resources Cold Water Research Headquarters located along Stratton Lake Road. The Research Headquarters is appropriately classified as Administrative (AD₁). The Land Use Classification Map (Figure 2) illustrates the location of the site.

RESOURCE MANAGEMENT PROBLEMS

The major problem of the area is the extensive number of large dead and dying elm trees. Many of the trees have fallen into the creek and have caused a slowing and widening of the current. Heavy brush along portions of the stream has also contributed to the widening and shallowing process. The fallen trees and brush have created difficult fishing conditions. The brush and trees presently in the creek and those threatening to fall should be removed prior to stream improvement.

Illegal overnight camping and associated litter has been a problem at several locations. Restricting drive-in access to these areas should alleviate the problem.

RECREATION NEEDS AND JUSTIFICATION

In 1978, the population of Portage County was estimated to be 55,555, while Waupaca County's population was estimated at 41,425. Stevens Point and Waupaca are the closest major population centers. Stevens Point had an estimated population of 23,631 in 1978 and is approximately 35 miles from the Emmons Creek Fishery Area. Waupaca is 6 miles from the fishery area and had an estimated population of 4,608 in 1978. The smaller villages of Rural, Wild Rose and Almond are also nearby. The 1978 population of Waupaca and Portage Counties, and all immediately adjoining counties was 705,512. Waupaca and Portage Counties are prime recreational centers and are heavily used. The close proximity of Hartman Creek State Park (2 miles) with its 185,000 annual visitors also contributes to the use of the fishery area. It is the pressure from local residents and surrounding areas that dictate the intensive management of existing public areas and the acquisition of additional public land. By 1990, some recreation opportunities may be limited without intensive management or increased acquisition.

Emmons Creek has a well known reputation of being one of the finest trout streams in central Wisconsin. It receives heavy fishing pressure throughout the year. Creel census surveys have shown that present fishing pressure on Emmons Creek is approximately 550 angler days/mile of stream. Present fishing pressure is calculated to be approximately 3,420 angler days when it is projected to cover the entire 6.22 miles of stream.

By 1990, fishing pressure is expected to increase to 596 angler days/mile of stream (8.5% increase). Acquisition of the remaining stream frontage and development of stream improvement must remain a high priority if the resource is to be maintained and/or improved.

ANALYSIS OF ALTERNATIVES

Do Nothing

If all management practices were suspended, deterioration of fish habitat would occur in future years. Brush and fallen trees would continue to encroach into the stream channel causing habitat deterioration and difficult fishing conditions. Any existing and future erosion problems would go uncorrected. Sand and silt would decrease the overall depth of the stream, fill in holes and cover spawning beds. The fishery would diminish.

Vegetative cover would eventually reach the climax stage of succession causing the habitat for game and non-game species to deteriorate. Animal populations would decline, thereby reducing recreational opportunity for enjoying these wildlife species.

Enlarge Project

Enlargement of the property boundaries is desirable and recommended. The ever increasing use by fishermen, hunters and naturalists will eventually overtax the present resource. The proposed enlargement of the property will also preserve and protect the water quality of the stream. The recommended enlargement would extend the boundaries to include an additional 184 acres of land. The boundaries are shown on the Property Ownership Map (Figure 2).

Reduce Project

Attainment of the goals and objectives would be impossible if the area was reduced.

07840

Appendix - Master Plan Comments by Outside Reviewing Agencies

Comments regarding the 45-day review copy of the Emmons Creek Fishery Area Master Plan were received from a number of outside reviewing agencies. Their comments, and DNR responses, where appropriate, follow:

Roy C. Willey, Jr., Executive Director East Central Wisconsin Regional Planning Commission, Menasha, WI 54952

The East Central Wisconsin Regional Planning Commission has reviewed the Emmons Creek Fishery Area Master Plan Concept Element as it relates to local and regional plans for Waupaca County. The Commission supports the recommended management and development program. We feel it will preserve and manage a valuable resource for recreational and educational opportunities. This project is especially significant as it is adjacent to and complements the Hartman Creek State Park.

East Central does recommend the Department contact Waupaca County and Portage County regarding the potential designation of Emmons Creek Road as a scenic roadway. This issue has been proposed in Waupaca County.

DNR response: Do not agree. Such designation could place increased usage on the roadway.

Dale Peterson, Fox Valley Chapter of Trout Unlimited

Along with the Demonstration Area, I would like to see some special regulations in that area such as 1 fish over 12" per day. I think you want to show the people that fish the demonstration area how these stream improvement devices increase fish numbers and size and special regulations may be needed to maintain an excellent fish population in this area.

DNR response: Demonstration of stream improvement to the public that increases numbers and size can be better accomplished by leaving regulations the same. Otherwise it could be assumed that any improvement in numbers and sizes are a result of the more restrictive regulations and not a result of improvement. The cold water, small size of the stream, and primary food consisting of invertebrates has resulted in large numbers of slow growing trout. An April, 1981, population estimate indicated a heavy density of trout, (4,420 per mile) of which only 3% were greater than, or equal to, 10 inches. Although size limits do have application on certain streams, on Emmons it would only cause an under harvest of the smaller individuals which do not need special protection.

R. W. Baker, Director, Dept. of Transportation, Bureau of Environmental Analysis and Review, Box 7916, Madison 53707:

We have reviewed the above noted document and determined that the proposal will not affect transportation interests or concerns.

We thank you for the opportunity to review and comment on this Master Plan.

Steven A. Henshrot, Resource Agent, UW EXT., Waupaca County, Waupaca WI

Very well written and I am highly supportive of the proposed plan.

Page 4 - 1st paragraph:

Would it not be better to develop the parking lots after stream improvements if you are already experiencing camping and litter problems?

DNR response: The parking lots will be useful during construction of the stream improvement, therefore should be provided prior to stream improvement. Overall, litter and illegal camping will be better regulated when parking is confined to specific parking lots along the road, and off-road access is restricted. There is also likely to be an increase in fishing pressure with the development of stream improvement and the parking lots should already be constructed so as to accommodate the increased use of the area.

Page 1 - Annual Additional Benefits:

Is swimming really realistic? and item 2: What endangered or threatened species? (Perhaps rewording is in order.)

DNR response: Inclusion of swimming as an Additional Annual Benefit was listed only if the proposed expansion of the boundary and acreage goal to include Fountain Lake is approved by the Natural Resources Board. As relates to Endangered or Threatened species, a statement in the master plan indicates that at present, none are known to exist within the boundary. However, a complete biological inventory has not as yet been completed. If, and when the inventory is made, it is possible that an endangered or threatened species may be identified.

Very clear maps and graphic illustrations.

Interesting reading with concise and clear management objectives of which I concur with.

Keep up the excellent work!

W. J. Burke, Portage County Planning Department, Stevens Point

Enclosed is my department's review comments on the above referenced plan as provided on your summary sheet.

Your department's Planning Bureau has a copy of our County Board's adopted Development Guide which specifies our policies regarding Resource Protection.

I would also like to point out that I believe it is important for other local officials to be made aware of this project and be given the opportunity to make comments and recommendations.

DNR response: The master plan was sent to everyone possible. If someone was missed, it was unintentional. Notices have also been published and public meetings held.

Page 4

No clear management plans for Fountain Lake and its shoreland and fringe lands.

DNR response: Management of Fountain Lake and surrounding area I feel is adequately discussed in paragraph 3 of item 1 on page 4. However, final plans will not be made until the property acquisition is approved by the Natural Resources Board and if, and when it is acquired.

Page 4

Analysis needed about local and county fiscal effect.

Page 10

Would guess that expanded project will create some of the resource threatening pressure project is intended to reduce.

DNR response: A Professor M. Rossner of UW-Stevens Point completed a study a few years ago that concluded there was no significant fiscal affect upon a locality as a result of state ownership. The state makes a payment in lieu of property taxes to the local government and school districts. Actually, Rossner's study concluded that the money spent by recreationalists for gas, food, lodging, etc. resulted in a slight fiscal improvement to the local community.

Expanded acquisition will spread out hunting and fishing pressure over a larger area and will afford much needed protection from development to the area.

Support addition of Fountain Lake and adjacent lands to project area. The County has been acting to discourage development in the area inspite of DNR's previous position that the lake and its adjacent land were not important to the fishery and the overall project. Town government has also been holding-off development as best they can.

Preservation of the resource is consistent with the County's development policies which, however, do not address the public purchase aspect.

DNR response: We are not exactly certain what is meant by the "public purchase aspect", but possibly the response regarding Rossner's study, and the state's payment in lieu of taxes may answer the comment.

Forest Stearns, Chairman, Scientific Areas Preservation Council

We have reviewed the concept master plan for the Emmons Creek Fishery Area. In most respects the proposed management is appropriate for restoration of the stream's water quality and trout fishery. Fountain Lake is recognized as a unique and relatively undisturbed headwaters, and a classification of public use natural area or habitat preservation zone may be more appropriate for the lake since no development need is shown in the plan. Likewise, the project area in the Emmons Creek area below the habitat development zone may also be more appropriately classified as a habitat preservation zone.

DNR response: Classification of the Fountain Lake area and the stream below Emmons Lake is best classified as a Resource Development, Fish and Wildlife Area because: Timber harvest and vegetative management for game are generally not conducted under the Public Use Natural Area or Habitat Preservation Areas classifications. The dam on Fountain Lake holds a 5' head of water, therefore it is questionable whether it could be considered a "relatively undisturbed ecosystem" as required by the Public Use Natural Area Classification. The reduced flexibility of management options available to an area after it is classified as either a Public Use Natural Area or Habitat Preservation Area would be undesirable. An example may be that some day the dam on Fountain Lake may need repairs and/or it may be determined that it is harming the water quality of Emmons Creek. Under the present classification, appropriate action such as replace, repair or remove the dam will be available. We may not have the same flexibility if the areas were classified by one of the more restrictive categories.

William B. Stark, County Chairman, Wisconsin Conservation Congress, Weyauwega, Wis. 54983

Good content, good coverage of all aspects affecting the project and surrounding area, as well as historical/geological background. Overall view: Excellent.

Thank you for including me in the comment process on the Emmons Creek Fishery Area. Since the plan exhibits a very high degree of professionalism in its preparation, my questions and comments are quite limited. I will state the Department position per item 4, and then will place my question(s)/comments directly underneath.

Page 6, Paragraph 4

"Present fishing pressure is calculated to be approximately 3,420 man days when it is projected to cover the entire 6.22 miles of stream. Fishing pressure is anticipated to increase to approximately 4,785 man days/year upon implementation of habitat improvement as identified in the master plan."

Comment:

While the habitat improvement no doubt will bring about certain improvement benefits to the area, it is doubtful that an increase in area use is properly classified as a benefit. An increase in use (over 120 useage) from 4.5 users per day to 6.43 users per day could cause problems for the fishery relating to overuse, various forms of pollution, and some habitat destruction. All this, would of course, translate into a declining fishery.

While perhaps I should be, I am not a strong supporter of increased public access to all possible areas. Limited access to a wild area such as proposed for the Emmons Creek area coupled to habitat improvements as outlined would more properly maintain a purely wild area for limited use on a daily regulated basis. The installation of artificial habitat structures to increase useable "pressure" on the resource does not further sport and recreation for sport and recreations sake, but, rather, the "grab the game and run" theology now widely in use.

More use of such a small area would appear to tend toward more abuse of what little remains in a wild untouched state.

DNR response: The purpose of habitat improvement is not to increase useable pressure or promote the grab the game and run theology. Habitat improvement is designed entirely to improve living conditions for the trout. As a trout population improves in response to the habitat improvement, fishing also improves and increased fishing pressure usually occurs. Research has shown that habitat improvement will result in more and larger trout in spite of increased fishing pressure. Habitat improvement improves a fishery and does not ultimately cause a declining fishery.

Page 6, Paragraph 5

"Presently, approximately 1,165 participant days of hunting and trapping occur on the property. This is expected to increase to 1,550 participant days, upon acquisition of the remaining 395.1 acres. If the acreage goal is enlarged to include the 184 acres recommended, as many as 1,750 participant days of hunting and trapping could result."

Comment:

What do the increases in participant days for the public area translate to as losses from the private area usage? If there is less usage now as a result of the surrounding private land management, what will be the impact of the 585 additional user days on the resources in an area which already receives heavy pressure? How would this pressure relate to the decline in deer already noted within that area due to the intensive agriculture practiced within that management unit?

If the current hunting and trapping pressure is adequate enough to provide for some measure of quality, it seems that an increase in use would only provide for less of a quality experience. It therefore becomes reasonable to reconsider the plan in terms of a limited access situation.

DNR response: Mr. Stark emphasizes several times the need to limit access to the area. Reducing or eliminating the number or size of the proposed parking lots will not reduce usage of the area because people have to park somewhere. It is advantageous for all to have safe parking areas just off the road where it can be centralized and regulated more closely. The alternative to not having parking lots is scattered parking all along the roadsides which is unsafe and causes more overall problems than if it is centralized in parking lots.

The Master Plan does recommend restricting drive-in access at several locations which will eliminate litter and illegal camping.

Limiting access by the methods suggested by Mr. Stark (every other day, time block, alternate day licensing) is not necessary. Increased acquisition is the method recommended to spread out usage and still provide quality recreational experience.

We must remember that the majority of Emmons Creek Fishery Area is classified as a Fish and Wildlife Management Area, and not a Wilderness or Natural Area.

Present usage of the area is not so excessive as to cause destruction. The expected increase of 585 user days will not

cause destruction or overharvest because it will be spread out over more acreage and habitat improvement for both fish and game will be implemented. The quality and quantity of the habitat are the key criteria which determine the abundance and condition of fish and game, not usage.

It appears that Mr. Stark assumes that the incentive of the Department is to cram as many people as possible into the area, which is not true. Actually, we are trying to preserve and improve an area for fish and game and provide recreational opportunity to the public. We feel that public use will not threaten the area as long as fish, game and pollution laws are abided. If they are not abided, then law enforcement must step in and correct the situation. We do not want to restrict recreational opportunity to the law abiding citizen because someone else breaks laws and/or causes problems.

There has not been a decline of deer in the area as indicated by Mr. Stark. If deer were to decline, the either sex quota permit numbers could be adjusted accordingly. Deer are managed by issuance of either sex quota permits, not prohibiting people from using an area.

Page 6, Paragraph 6

"A variety of birds and animals inhabit the property area both seasonally and permanently. Wildlife management will be directed toward creating a diversity of habitat types, thereby creating a large edge factor which will provide suitable habitat for both game and non-game species. Wildlife species which will particularly benefit will be white-tailed deer, grey squirrel, cottontail rabbit, ruffed grouse, and woodcock. The property presently receives very heavy deer hunting pressure during both bow and gun seasons."

Comment:

Is the "diversity of habitat types" a warmed over attempt to validate a theory called species diversification promulgated by the FWS National Wildlife Health Laboratory? What is wrong with the current habitat types found in the area? Are they natural? Are they normal? Why then should they be changed? How would this "diversity of habitat types" affect the surrounding area?

What I appear to read in these three paragraphs is that the Emmons Creek area is to become a quantity over quality area designed for large infusion of people (6,535 man days of use in approximately 180 days) into a 6.22 mile long area. If, indeed, this is the case, I object. Throughout the master plan there are indications that the entire ecosystem of Emmons Creek area is in fairly even balance. However, at no time is the imbalance imposed by higher man/day use discussed.

It is proper for the Department planners to attempt to make as full a use of any given area of public property as is possible. However, it would also seem prudent to explore the possibility of a limited access approach to an area caught between pressing agriculture, real estate subdivision, and the

beginning of urban sprawl. It would seem an inviting management option to consider the idea of development as outlined while using a limited access approach in order to preserve a piece of wildness that could easily become corrupted by additional use.

It cannot be argued very well against the discontinuance of pheasant stocking in the area. However, personal observations over 20 years do tend to negate the Department attitude concerning pheasant release in some northern counties. It would seem that the adjacent clean farming practices would do more harm to carry over than predation.

DNR response: The "diversity of habitat types" is not a theory called species diversification promulgated by the FWS National Wildlife Health Laboratory. Increasing habitat diversity and edge factor are accepted techniques of wildlife management. Selective cutting to promote regeneration will keep the area in a variety of stages of succession with occasional plantings of preferred plants. There will not be a radical change in vegetation of the area. Wildlife management will be aimed at maintaining a diversity of natural vegetation types.

We do not anticipate "large infusion of people", and usage is spread out over much more than the 180 days indicated by Mr. Stark. From the May opening of fishing until the end of the cottontail rabbit hunting is approximately 300 days alone.

Page 10, Paragraph 3

"Illegal overnight camping and associated litter has been a problem at several locations. Restricting drive-in access to these areas should alleviate the problem."

Comment:

Would, however, the limiting of drive-in access to overnight camping compensate for the litter problem created by 6,535 man/days of usage to the area compared to the current 4,585 man/days of use? What is the scope of the current camping problem?

It is agreed that by 1990 recreational opportunities may be severely limited. This, of course, leads right back into limited access into quality areas on an every other day basis, limited time-block access, or lease. Alternate day licensing would be another approach to limited access.

DNR response: The scope of the current camping problem is primarily an occasional overnight camper and/or beer parties. The solution is simple...a gate. Litter is not expected to be as great a problem with development of the parking lots, where it will be centralized and easier to clean up.

Page 10, Paragraph 9

"Enlargement of the property boundaries is desirable and recommended. the ever increasing use by fishermen and hunters will eventually overtax the present resource. The proposed enlargement of the property will also preserve and protect the water quality of the stream...."

Comment:

It is definitely agreed that the property should be enlarged in order to facilitate its better management. However, with the admission that usage will outstrip the resource by 1990, it would seem prudent to give very serious consideration to limited access now.

In understanding that water quality is of importance the preceding paragraph should also apply toward this aim.

Based upon the presentation of the plan thus far, only limited access can provide a use level noncommittal with the ability of the resource to tolerate use and recover satisfactorily.

DNR response: Answered previously.

Page 11, Paragraph 2

"Converting the upper section of Emmons Creek exclusively to native brook trout should be considered. A fish barrier on the lower end of the brook trout section would be necessary to prevent upstream migration of the exotic brown trout. Removal of the brown trout above the barrier would be necessary."

Comment:

Why? If the brown trout population has remained compatible with the brook trout population thus far, what reason is there for inhibiting the apparently natural breeding run of the brown now? It would seem that the current compatibility coupled to the stream reputation as one of the very best would preclude any manipulation of current population segments in any artificial way.

It would appear this should be answered prior to any artificial manipulation of the naturally balanced fish population.

DNR response: In the initial draft, an alternative consideration was to convert the upper half of Emmons Creek exclusively to brook trout which would have necessitated a barrier. This alternative is not being submitted in the final plan being submitted to the Natural Resources Board.

Conclusion

The Emmons Creek Master Plan is as well done as the Navarino and Mukwa plans preceding them. There are, as I have indicated, some serious questions that must be considered.

Any of the proposed management aspects of the plan would be acceptable within the realm of limited access. Such a small area nestled in what is becoming a fragile natural area due to encroachment of civilization cannot be thought of in terms of increased usage unless losses in environmental resource quality, as well as long run quantity. This is a consideration that must be discussed within the plan framework.

I am aware that limited access is an unpopular idea in many conservation circles. However, if our prime concern is quality of the resource experience, then we have only to look at the highly successful areas limited to access by back packing, or limited to use without motors, etc. If the Emmons area is a first

class trout area that also provides excellent hunting and trapping, it would be advisable to keep it just what it now is in terms of public access.

I would only favor the implementation of this plan in terms of a limited access concept consistent with current usage levels.

DNR response: The only changes proposed are to regulate and centralize access points at parking lots and eliminating off the road access to areas being used for illegal overnight camping and partying.

Henry W. Kolka, Chairman, Wild Resources Advisory Council

This is another terrific summation and management proposal. The WRAC wishes to congratulate the Emmons Creek Fishery Area Master Plan Concept Element Task Force of Scot Ironside, Bob Hunt, Paul Lochner, Mike Primising and Bruce Gruthoff for a superb performance and their appreciation of a quality wild resource. The Council enjoys reviewing a product of this type.

General Review

The Emmons Creek Fishery Area Master Plan Concept Element is splendidly recorded. WRAC congratulates the Task Force of Scot Ironside, Bob Hunt, Paul Lochner, Mike Primising and Bruce Gruthoff. The Council particularly admires the artistry and philosophy incorporated in the report. There are few ecosystems on the earth as rich in wildlife, considered to be beautiful, as is a quality trout stream and its environs. This is the main reason why the WRAC has insisted that management criteria for trout stream corridors should have its roots in the enhancement of the stream and fringing lands. The Council is in full accord with the sentiment expressed in the paragraph in the middle of page 5. Quote: "As the years pass, people from Wisconsin will come to love and respect this small natural place for the fish and wildlife resources it produces and the feeling of peace and solitude it offers by allowing a person to walk its stream banks or sit in its cool green forests." Beautifully stated. The Council is impressed by the fact that the concept meets the need of the visitors interested in this type of recreation and education.

Comments and Recommendations

1. Page 1 Goals

Since the educational values are often stressed in the text, WRAC recommends the insertion of and educational between the words recreational and activities.

DNR response: Agreed. Addition inserted.

2. Pages 1, 4 and 5 Recommended Management and Development Program

WRAC rates this section as top level. It is excellently analyzed and management proposals are superb.

- a) The proposed conducted tours of the demonstration area is a well conceived educational procedure.
- b) The WRAC recommends that the Indian archeologist site (last paragraph page 1) be designated in the report and appropriate measures for protection be prescribed.

DNR response: Do not agree. We question the necessity to designate the exact location. Protection would be difficult, and listing the exact location may focus undue attention on the site. Legitimate educators or archaeologists may obtain the information needed from the State Historical Society.

- c) Item 1 page 4. The Chairperson of WRAC has had the privileges of visiting Fountain Lake. It is an excellent piece of real estate, actually a natural wonder. The Council is in full accord with the analysis and the recommendation made by the Task Force of acquiring the 126 acre block, including Fountain Lake, and attaching it to the Emmons Creek Fishery Area. The level of Emmons Creek water quality is dependent on state controlling Fountain Lake and its environments. WRAC recommends that the NRB endorse this acquisition and proceeds with haste to acquire it. The future of this project depends on it.
- d) Table top of page 5. The WRAC considers the new acreage goal recommended by the Task Force of 1,642.81 acres realistic and absolutely necessary to achieve the goals and objectives of the Master Plan Concept Element. The Council supports it and recommends that NRB approves it.

3. Background Information - Page 5

Another very outstanding section. WRAC considers paragraphs 2 and 3 the best justification for maintaining quality trout streams for public benefit.

4. Page 6 Fish and Wildlife

Another example of excellent composition, particularly the first paragraph. In the opinion of the WRAC the section doesn't go far enough. The Council recommends that the Task Force include a provision under the heading of Fish and Wildlife of making substantial inventories of all wildlife species including the stressed group.

DNR response: Agreed. The master plan will include the recommendation with the provision that complete biological inventories or surveys be made as funds permit.

5. Pages 5 and 8 Vegetative Cover

WRAC makes the same recommendation as in item 4 above. The Council recommends that a substantial list of plants, particularly, the flowering species be inventoried for educational purposes.

DNR response: Same as 4 above.

6. Page 9 Last Paragraph of the Page

WRAC recommends the insertion of and educational be inserted between the words recreational and use.

DNR response: Agreed.

7. Page 10 Recreational Needs and Justification

WRAC recommends that the heading above and in the Table of Contents be enriched by adding and Educational between the words Recreational and Needs. A similar recommendation is made for last line of first

paragraph; the insertion and education between recreation and opportunities.

DNR Response: Do not agree for Table of Contents. They are standard headings.

8. Page 10 and 11 Analysis of Alternatives

WRAC supports the second option, enlarge the Project and encourage Board approval. The Council recommends the addition of a comma following fishermen and the word naturalists before the word and.

DNR response: Agreed.

9. Last Paragraph page 11

WRAC endorses the potential consideration in the paragraph. Brook trout water need a shot in the arm.

10. Charts on pages 2, 3 and 7, labelled figures 2, 3 and 4 are excellent and correlate very well with the written text.

(For All DNR Type II Actions, Except Regulatory)

FORM 1600-2
REV. 1-78

DEPARTMENT OF NATURAL RESOURCES

DISTRICT OR BUREAU

DNR NUMBER

ENVIRONMENTAL IMPACT ASSESSMENT SCREENING WORKSHEET
(Attach additional sheets if necessary)

Title of Proposal: The Emmons Creek Fishery Area

Location: County Portage, Waupaca
Township 21 North, Range 10 & 11 East, ~~WXXX~~
Section(s) 10, 11, 12, 13, 14 (R10), 11, 10, 5 (11)
Political Town Belmont and Dayton

Project:

1) General Description (overview)

A 1,418.85-acre area containing a Class I brook and brown trout stream plus valuable habitat for wildlife. The area is managed for fish and wildlife and provides a variety of outdoor recreational opportunities. Two boundary modifications are recommended that will 1) result in a uniform southern boundary and, 2) will include Fountain Lake within the acquisition boundary.

2) Purpose and Need (include history and background as appropriate)

State management is required to preserve and protect this valuable stream and its surrounding watershed. State ownership and management ensures the resource will not be degraded by farming, urban development or harmful land use practices. The area is surrounded by two counties having a population of 85,000 people. It provides recreational opportunities for many people.

Authorities and Approvals:

- 1) Statutory Authority to Initiate Wisconsin Statutes 23.09 and 30.12. Chapter NR 80, Wisconsin Administrative Code.
- 2) Permits or Approvals Required Stream improvements by District Director, Project boundaries by Natural Resource Board.
- 3) Participants notified of above requirements? Yes No
- 4) Does this proposal comply with floodplain and local zoning requirements? Yes No

Estimated Cost and Funding Source:

Land acquisition to complete the property goal will cost about two hundred seventy-six thousand dollars. Costs are covered by a variety of programs. Habitat work would be done under the trout stamp program.

Time Schedule:

Continuing land acquisition and habitat improvement based upon need and funding.

EXISTING ENVIRONMENT

- 1) Physical (Topography-soils-water-air-wetland types) Emmons Creek originates in Portage County and flows easterly through hilly terrain created by glacial moraines, before entering the Chain O'Lakes in Waupaca County. Soil types are predominately sandy loams with granite bedrock underlying. The watershed is largely wooded with increasing numbers of acres being changed to irrigated farming. The major source of water for Emmons Creek is Fountain Lake, a beautiful, crystal clear 15-acre spring pond. Water quality is excellent arising from a continuous source of springs and groundwater. Flows are strong and reliable, averaging 17 cfs.

The close proximity of Emmons Creek Fishery Area to Hartman Creek State Park (2 miles), undoubtedly contributes to use of the area.

2) Biological

a) Flora Forest vegetation is primarily composed of oaks, swamp hardwoods and red pine plantations. Interspersed among the forest vegetation are openings of grass, brush, and agricultural fields. No known rare and/or endangered species are known to inhabit the area. Share cropping will continue as long as there is local interest and it is consistent with the goals and objectives of the area. Aquatic vegetation is primarily potamogeton species, ranunculus species and elodea species.

b) Fauna The stream contains brook and brown trout and other fish species characteristic of a cold water stream and aquatic invertebrates. Adjacent lands contain whitetail deer, fox, raccoon, squirrel, ruffed grouse, woodcock and a wide variety of nongame birds and animals typical of Central Wisconsin. No known rare and/or endangered species are known to inhabit the area. Pheasant stocking has been conducted in the past. The stocking program is recommended to be discontinued due to the artificial nature of the program and the poor carry over of the birds surviving the hunting season.

3) Social

The fishery area is popular among local and state trout fishermen and receives fishing pressure all through the season. Big game and small game hunting attracts additional visitations in the fall of the year. Hiking and cross-country skiing are on the increase.

4) Economic

The economy in this area is based around agriculture, primarily cash crops like potatoes, beans and corn. Dairy farming is also common.

- 5) Other (include archaeological, historical, etc.) The State Historical Society reported a group of prehistoric burial mounds in the NW $\frac{1}{4}$, NE $\frac{1}{4}$ of Section 8, T21N, R11E, Waupaca County and further indicated "it is almost certain that there are many more prehistoric sites within the boundaries of the fishery area".

PROPOSED ENVIRONMENTAL CHANGE

1) Manipulation of Terrestrial Resources (include quantities – sq. ft., cu. yds., etc.)

Management of the area will result in a manipulation of vegetation. Management activities will be conducted on the acreage already under state ownership and will expand to the acreage within the proposed boundary changes and proposed acquisition areas as they become state-owned. Timber management will involve the harvest of 60 cords of round wood products per year and will be consistent with wildlife management objectives. Wildlife management will be directed towards creating a diversity of habitat types. Along selected sections of the stream bank, woody vegetation such as tag alder, willow and elm trees will be removed and sprayed with Ammate X-NI to prevent regeneration. Off-road vehicle access will be restricted so as to prevent destruction of the vegetation and illegal camping.

2) Manipulation of Aquatic Resources (include quantities – cfs, acre feet, MGD, etc.)

The proposed stream habitat spot development will involve the installation of 1/2-logs and boom covers through out nearly 5 miles of stream. Approximately 500 1/2-logs and 40 boom covers are proposed per mile of stream. Diagrams illustrating the 1/2-logs and boom covers are attached. Approximately 1 mile is proposed as a stream improvement demonstration area. The demonstration area will involve a variety of habitat improvement techniques such as brush removal, brush bundles, boulder groupings, 1/2-logs and boom covers. The demonstration area will be developed out of the Cold Water Research Office located on the stream. The management plan for Fountain Lake is essentially to leave it as it is, unless there is evidence that water quality of the creek is deteriorating due to the dam. If this occurs, removal of the dam would be recommended.

3) Structures

Extensive instream habitat improvements will be developed on the Emmons Creek. Future plans include improvement of 5 miles of stream.

4) Other

Seven small parking lots each with 5-10 car parking capacity with crushed rock surface are proposed. Each parking lot is located just off an existing town road so as to minimize adverse effects upon aesthetics and wildlife.

5) Attach maps, plans and other descriptive material as appropriate (list)

Map 1 - Location of the Emmons Creek Fishery Area.

Manipulation of Aquatic Resources (continued)

Converting the upper section of Emmons Creek to exclusively brook trout is considered. This would be accomplished by installing a fish barrier on the lower stretch of stream. The barrier would prevent the annual migration of brown trout upstream, thereby eliminating competition with the brook trout. The barrier would be located to provide the brown trout with a sufficient stretch of stream to permit successful natural reproduction.

Physical Impacts (continued)

It is unlikely that stream improvement will have any major affect on downstream accumulation of silt. Similar work has been done for many years on a number of streams without any adverse accumulation of silt downstream. Installation of half logs may create occasional inconveniences while wading, especially after dark.

Impacts

Economic^A(continued)

Additional state-owned land on Hartman's Creek, Radley Creek, Pearl Creek and Murry Creek is available within a short distance.

PROBABLE ADVERSE AND BENEFICIAL IMPACTS (Include Indirect and Secondary Impacts)

1) Physical Impacts The installation of instream structures will result in temporary turbidity and disturbance to the stream bed and banks. Permanent physical impacts to the stream will include: increased water velocities, scouring, narrowing and deepening. Removal of woody vegetation and application of herbicide will result in grasses becoming established along the streambank. Development of 7 small parking lots adjacent to existing roads will cause compaction of the soil and destruction to vegetation at the site. Wildlife management will involve cutting and/or planting to promote a wide variety of plant species and age classes to increase the edge factor. Timber management will include the harvest of 60 cords of round-wood products per year.

2) Biological Impacts

Beneficial biological impacts of habitat work will strongly outweigh any adverse impacts. Stream side brush removal could have a minor effect on grouse and woodcock. This removal is very small, however, in relation to similar habitat available elsewhere on the property. Brush will be replaced by reed canary grass and other native grasses which will provide escape cover for wildlife while stabilizing stream banks. Brush removal allows more sunlight to reach the stream thus increasing plant growth which provides cover and food for invertebrates.

Rocks and lumber used in the construction of deflectors and structures will provide a permanent substrate for invertebrates as well as providing cover for trout. The narrowed stream channel with increased flow will expose new gravel spawning areas and keep others free of silt and sediment. Adverse biological impacts will come from the temporary disruption of the stream bottom during construction. This will have no serious effect on the aquatic community.

3) Socioeconomic Impacts

a) Social There will be an increase in land available for outdoor recreation as a result of the boundary changes and as acquisition continues. The increased recreational opportunity will attract more outdoor recreationalists to the area. The modifications to the stream and vegetative cover along the bank will improve navigability by creating easier wading and improved fishability. Restricting off-road vehicular access will reduce illegal litter and overnight camping problems.

b) Economic The affect of this property on the local economy should not be significant. Slightly increased expenditures for gas, food, bait and lodging might be expected. Property taxes will no longer be collected after state ownership. However, there will not be any adverse economic impacts upon the community. The state will continue to make payments in lieu of taxes at a rate decling 10% each year. In no year shall the payment fall below \$.50 per acre, or 10 percent of the present tax, whichever is greater.

4) Other (include archaeological, historical, etc.; if none, so indicate.) Surveys coordinated with the State Historical Society will be conducted at each site prior to development. If development threatens any significant historical or archaeological sites, appropriate protective measures will be taken.

PROBABLE ADVERSE IMPACTS THAT CANNOT BE AVOIDED

Habitat development projects will temporarily increase turbidity and disturb the stream bottom and banks. The heavy equipment used for instream structures will disturb stream side vegetation for the length of one growing season. Improvements to the area may result in increased public use but this should cause only minor adverse impacts, such as littering and vandalism. The proposed parking lots will cause soil compaction and destruction of vegetation at the parking site. Removal from the tax role will cause a loss of revenue, but the financial loss will be absorbed by the entire state, not just the local community. The alteration in vegetation for Fish, Wildlife, and Forestry Management is not considered adverse impacts.

RELATIONSHIP BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Fish management projects are short-term in nature but will increase and maintain long-term productivity. Brushing and structure placement will have positive effects on trout and invertebrate populations. Once completed, projects will require only minor maintenance. Management surveys will enhance long-range productivity by providing information required to sustain population numbers. Wildlife management practices that will benefit upland game and will maintain and enhance long-term productivity are: shrub plantings and tree plantings in open and edge areas for food and cover. Selective cuttings for forestry and/or wildlife purposes will be of short-term duration. New growth will be stimulated which will effect various bird and animal species positively regarding long-term productivity.

IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS OF RESOURCES IF ACTION IS IMPLEMENTED

1) Energy

Fuel for vehicles and machinery used in habitat work is irretrievable.

2) Archaeological and historic features or sites

The State Historical Society reported a group of prehistoric burial mounds within the fishery boundary and further stated that there are likely to be more. Surveys will be coordinated with the State Historical Society at each site prior to development so as to properly protect all significant historical features.

3) Other

The planting of shrubs and trees could be considered irretrievable. No irreversible management activities are planned for the project area. Structures for fish habitat and plantings for forestry on wildlife can all be removed or replaced, if necessary.

ALTERNATIVES (No Action-Enlarge-Reduce-Modify-Other Locations and/or Methods. Discuss and describe fully with particular attention to alternatives which might avoid some or all adverse environmental effects.)

1. No Action
 - Fish and game populations would remain at current levels for awhile, then drop slowly. This would vary with hunting and fishing pressure, weather and natural diasters.

 - Lands not purchased by the state will be sold for sub-division, irrigated farming, campgrounds or some similar use. Habitat would slowly deteriorate due to natural succession, beaver dams, forest diseases, etc.
2. Enlarge
 - Project goals as outlined in the master plan are adequate at the present level.
3. Decrease project size
 - Any decrease in size would be detrimental to the purpose of preserving and providing lands and water for public benefit. Public recreational lands will become more and more important in future years.
4. Modify
 - Management practices and principals have been proven to be effective and economical. Modification would not be necessary unless research develops new practices which offer more benefits.
5. Other locations
 - Does not apply.
3. (Continued)
 - Purchase of a smaller tract surrounding Fountain Lake could be considered but the degree of protection to the land, water and recreational opportunities would not be available.
6.
 - Converting the upper section of Emmons Creek exclusively to native brook trout could be considered. A fish barrier on the lower end of the brook trout section would be necessary to prevent upstream migration of brown trout. Removal of the brown trout above the barrier would also be necessary.
7.
 - Purchase of easements or strips along the stream would significantly reduce the opportunities for many other recreational activities such as upland hunting, trapping and others listed under the objectives and additional benefits section of the fishery area master plan.

New
↓

EVALUATION (Discuss each category. Attach additional sheets and other pertinent information if necessary.)

- 1) As a result of this action, is it likely that other events or actions will happen that may significantly affect the environment? If so, list and discuss. (Secondary effects)

Habitat management will improve environmental conditions for fish and wildlife and populations will benefit. Removal from the tax role will cause a loss of revenue, but the financial loss will be absorbed by the entire state, not just the local community.

- 2) Does the action alter the environment so a new physical, biological or socio-economic environment would exist? (New environmental effect)

No.

- 3) Are the existing environmental features that would be affected by the proposed action scarce, either locally or statewide? If so, list and describe. (Geographically scarce)

Good trout waters are not common statewide. Protection and preservation for the future by state purchase or easement is desirable.

- 4) Does the action and its effect(s) require a decision which would result in influencing future decisions? Describe. (Precedent setting)

No. This program has been in effect in Wisconsin for many years.

- 5) Discuss and describe concerns which indicate a serious controversy? (Highly controversial)

None are known.

- 6) Does the action conflict with official agency plans or with any local, state or national policy? If so, how? .. (Inconsistent with long-range plans or policies)

No. It is consistent with the master plan for this property, and with state and national concerns for the protection and enhancement of our natural resources.

7) While the action by itself may be limited in scope, would related actions of this type result in major or significant impacts to the environment? (Cumulative impacts)

Yes. This is an excellent program and project. It should be encouraged and expanded statewide and nationwide. Trout stream environments and adjoining wildlife lands would definitely be benefited.

8) Will the action modify or destroy any historical, scientific or archaeological site?

Any historical or archaeological sites located on land owned by the Department will be protected.

9) Is the action irreversible? Will it commit a resource for the foreseeable future? (Foreclose future options)

Nothing has been done or will be done which cannot be changed. All changes are very slight and only for environmental improvements. The loss of fossil fuels through vehicles and machinery is irreversible.

10) Will action result in direct or indirect impacts on ethnic or cultural groups or alter social patterns? (Socio-cultural impacts)

No.

11) Other

DOT should be provided with copies of this EIA when it is public noticed due to the proposed boundary change.

Finmore Creek Watershed

AGENCIES, GROUPS AND INDIVIDUALS CONTACTED REGARDING THE PROJECT
DNR Personnel and Title

Date	Contact	Comments
1980	Bruce Gruthoff	Game Manager in agreement with the project.
	Jack Hoisington	Forester in agreement with the project and forestry practices.
	Bob Hunt	Cold Water Researcher in agreement with the project.
	Mike Primising	Fish Manager in agreement with the project.

RECOMMENDATION

EIS Not Required

Analysis of the expected impacts of this proposal is of sufficient scope and detail to conclude that this is not a major action which would significantly affect the quality of the human environment. In my opinion therefore, an environmental impact statement is not required before the Department undertakes this action.

Refer to Office of the Secretary

Major and Significant Action: Prepare EIS

Additional factors, if any, affecting the evaluator's recommendation:

SIGNATURE OF EVALUATOR <i>Scot Ironside</i>	DATE 6/16/80
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CERTIFIED TO BE IN COMPLIANCE WITH WEPA	
DISTRICT OR BUREAU DIRECTOR (OR DESIGNEE)	DATE

APPROVED (if required by Manual Code) <i>as amended</i>	
DIRECTOR, BEV <i>HS Druckenmiller</i>	DATE <i>11/17/81</i>

MS comment received WAP

This decision is not final until approved by the appropriate Director and/or Director, BEI.

Figure 4

COMPONENTS OF A HALF-LOG STRUCTURE

