Form 1100-1
Rev. 11-82

NATURAL RESOURCES BOARD AGENDA ITEM Item No. 6B-3

SUBJECT: MASTER PLANNING - Establishment of the Duncan Creek Fishery Area, Chippewa County, with an acreage goal of 460.18 acres.

FOR July (month) **BOARD MEETING**

TO BE PRESENTED BY: Ron Poff

SUMMARY:

Currently, 214.50 acres are owned in fee title and 110.42 acres in perpetual easement, all acquired as remnant areas on Duncan Creek, a fine trout stream in Chippewa County.

The master plan prepared by the Department recommends that those 324.92 acres serve as the keystone for a fishery area with an approved boundary and an acreage goal of 460.18 acres. The needed additional 135.26 acres to complete the goal would include 80.0 and 55.26 acres obtained from the Eau Claire and Chippewa County remnant acres, respectively.

Because much of the land acquired to date consists of 4-rod* easements on each bank, most of the management will relate to fish as compared to forestry and wildlife.

One fractional 40 (32.24 acres) is proposed to be used for trading purposes. No public use natural or scientific areas are proposed.

*1 Rod = 16½ feet.

RECOMMENDATION:

That the master plan be approved.

LIST OF ATTACHED REFERENCE MATERIAL:

No ☒ Fiscal Estimate Required — Yes ☐ Attached
No ☐ Environmental Assessment or Impact Statement Required — Yes ☒ Attached
No ☐ Background Memo — Yes ☒ Attached

cc: Judy Scullion - AD/5
Jim Lissack - Eau Claire
Carl Evert - OL/4
Ron Poff - FM/4
Vern Hacker, Oshkosh
Jim Addis - FM/4

APPROVED:

Bureau Director — Date 6/20/85

Administrator — Date 6/28/85

Secretary — Date 7-2-85

CORRESPONDENCE/MEMORANDUM

STATE OF WISCONSIN

Date: June 19, 1985 *File Ref:* 2100

To: C. D. Besadny

From: James T. Addis

Subject: Master Plan for the Proposed Duncan Creek, Chippewa County, Fishery Area

A Department task force has prepared the conceptual master plan and environmental assessment for the proposed Duncan Creek, Chippewa County, Fishery Area. They are attached for your review and approval.

The master plan has been through 45-day review by many agencies and individuals, with the comments of outside reviewers, and responses by the DNR task force shown in an appendix attached to the master plan.

The environmental assessment has been made available to the public and has been approved and filed by the Bureau of Environmental Impact.

A total of 214.50 acres in fee title and 110.42 in perpetual easement have been acquired through the Chippewa County remnant program on Duncan Creek from 1962 to date. Because Duncan Creek is a Class I brook trout stream that flows through agricultural lands, yet is heavily fished, the Department recommends upgrading its status to an approved fishery area with a boundary and acreage goal of 460.18 acres. The additional 135.26 acres needed to complete the acreage goal will be obtained by transferring 80.0 acres from Eau Claire County remnant acres and 55.26 from Chippewa County remnant acres. If approved, acquisition is 70.6% complete.

Most acquisition to this time has consisted of 4 rod easements on each bank. As a result most management proposed will affect fishery values.

Most of the fishery management measures will consist of instream development structures and devices. Where needed, fencing and machinery and cattle crossings will be developed. One parking lot will be constructed.

A state-owned fractional 40 of 32.24 acres which is isolated and difficult to reach from the other fishery area lands is proposed to be retained, and if possible traded for property more pertinent to the fishery area. If it cannot be traded, it will be planted to red pine.

No lands were found to be satisfactory for scientific or public use natural areas.

Development costs for property yet to be acquired have been estimated using unit costs referred to in the master plan. The attached table represents the cost range from minimal development including fencing, necessary crossings and streambank brushing to intensive development with continuous instream cover.

Your approval is requested to submit the master plan to the Natural Resources Board at their July meeting.

VH:mg
Attach.

Estimated Development Costs[1]

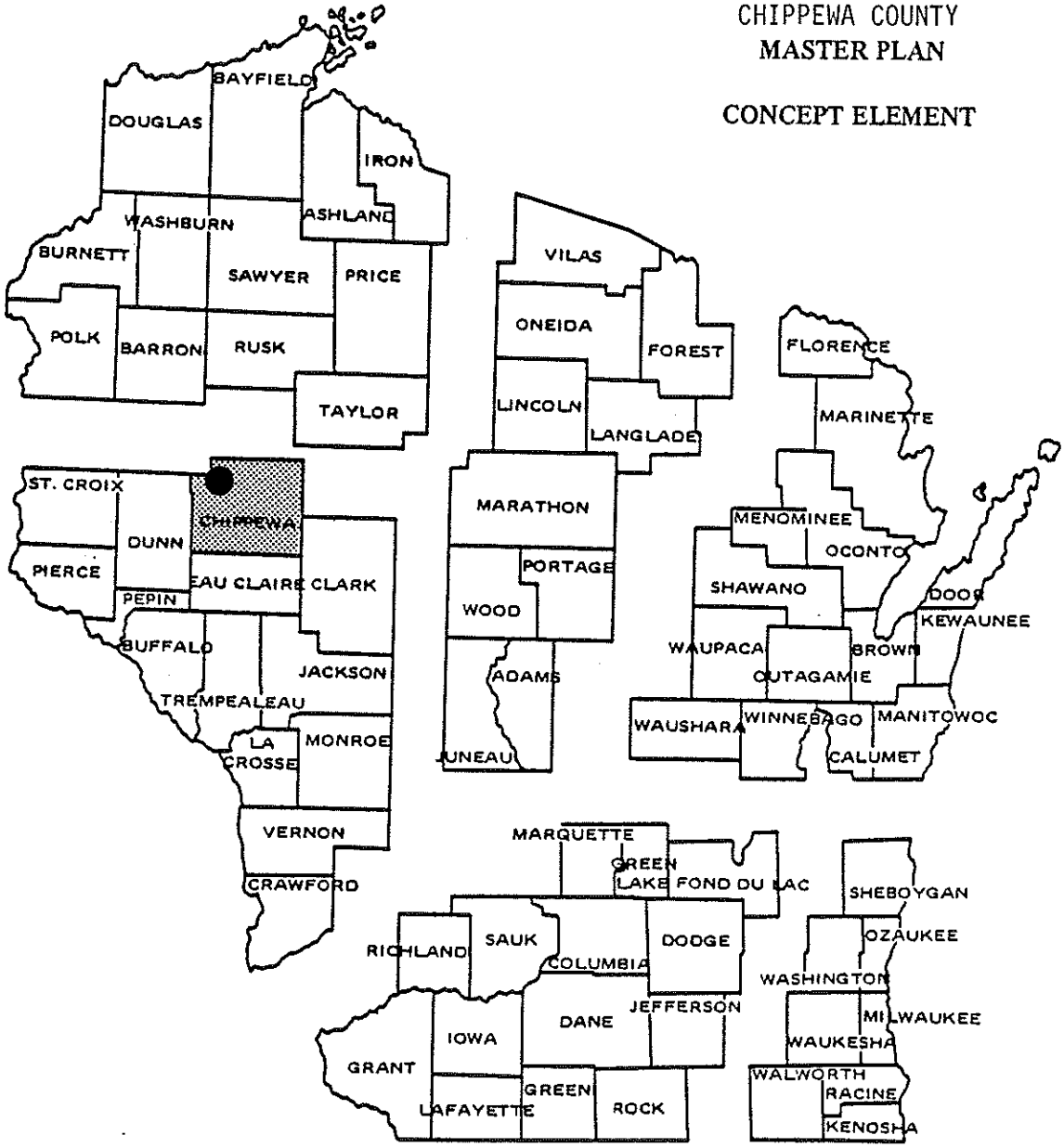
Duncan Creek Fishery Area

Streambank Fence - 5.4 miles @ $6,000/mile	=	$32,400.00
Crossings/watering holes/fenced - 14 x $1,000 each	=	$14,000.00
Parking lot for 10 cars - 1	=	$ 1,500.00
Stream Habitat Improvement - 3.6 miles range = $10,800.00		$115,200.00
Estimated Cost Range = $58,700.00		$163,100.00

[1]Habitat improvement costs at $32,000 per mile represent the maximum if all mileage was intensively improved. This is unlikely and will be further clarified in the implementation portion of this planning process. Minimum cost represents brushing only at $3,000 per mile.

PROPOSED DUNCAN CREEK FISHERY AREA
CHIPPEWA COUNTY
MASTER PLAN

CONCEPT ELEMENT



Property Task Force

Leader – DOUGLAS ERICKSON - FISH MANAGER
ROLLAND NESBIT - GAME MANAGER
BRIAN MARINELLO - FORESTER
NORMAN PAZDERSKI - PARK SUPT.

Approved by Natural Resources Board

_____
Date

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
MADISON, WISCONSIN

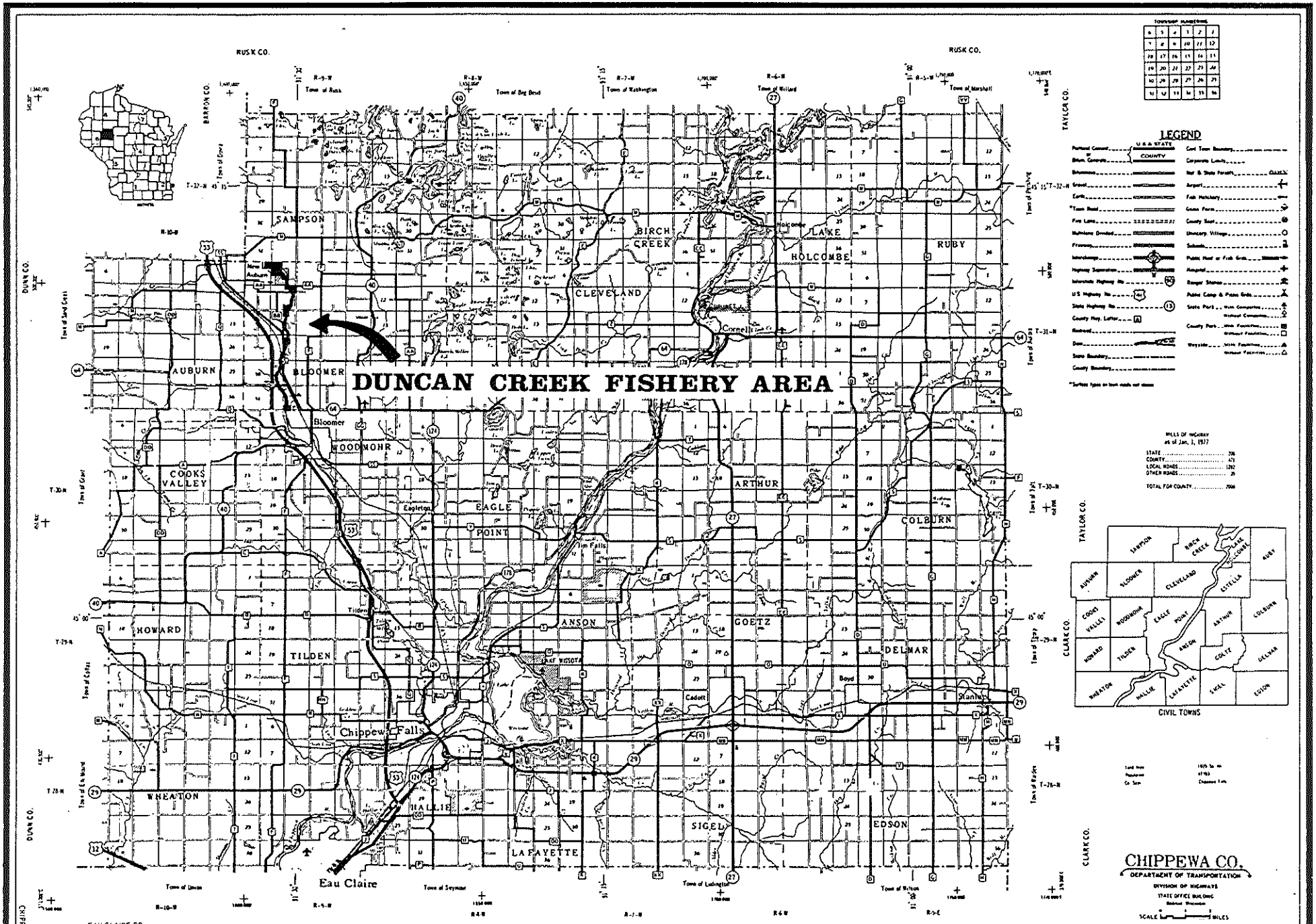


Figure 1. Location–Duncan Creek Fishery Area, Chippewa County.

1. Natural Resources Board establishment of the Duncan Creek Fishery Area with an acreage goal of 460.18 acres, and with the boundary shown.

2. The transfer of 324.92 Chippewa County remnant acres to the proposed fishery area, and reduction of the Chippewa County remnant acres by the same amount for lands already acquired.

3. Transfer of 80 acres to the Duncan Creek Fishery Area, and reducton of the same amount from the Eau Claire County remnant acres.

4. Transfer 55.26 acres to the Duncan Creek Fishery Area, and reduction of the same amount from the Chippewa County remnant acres.

Among the 214.50 acres owned in fee title is a parcel termed a "fractional forty" which actually consists of 32.24 acres (Figure 2). This land was part of a larger purchase, is isolated, and the site of a former house, which has been moved. It will be retained primarily to trade for lands more pertinent to the fishery area. If such a trade cannot be arranged, by 1994, the lands will be retained.

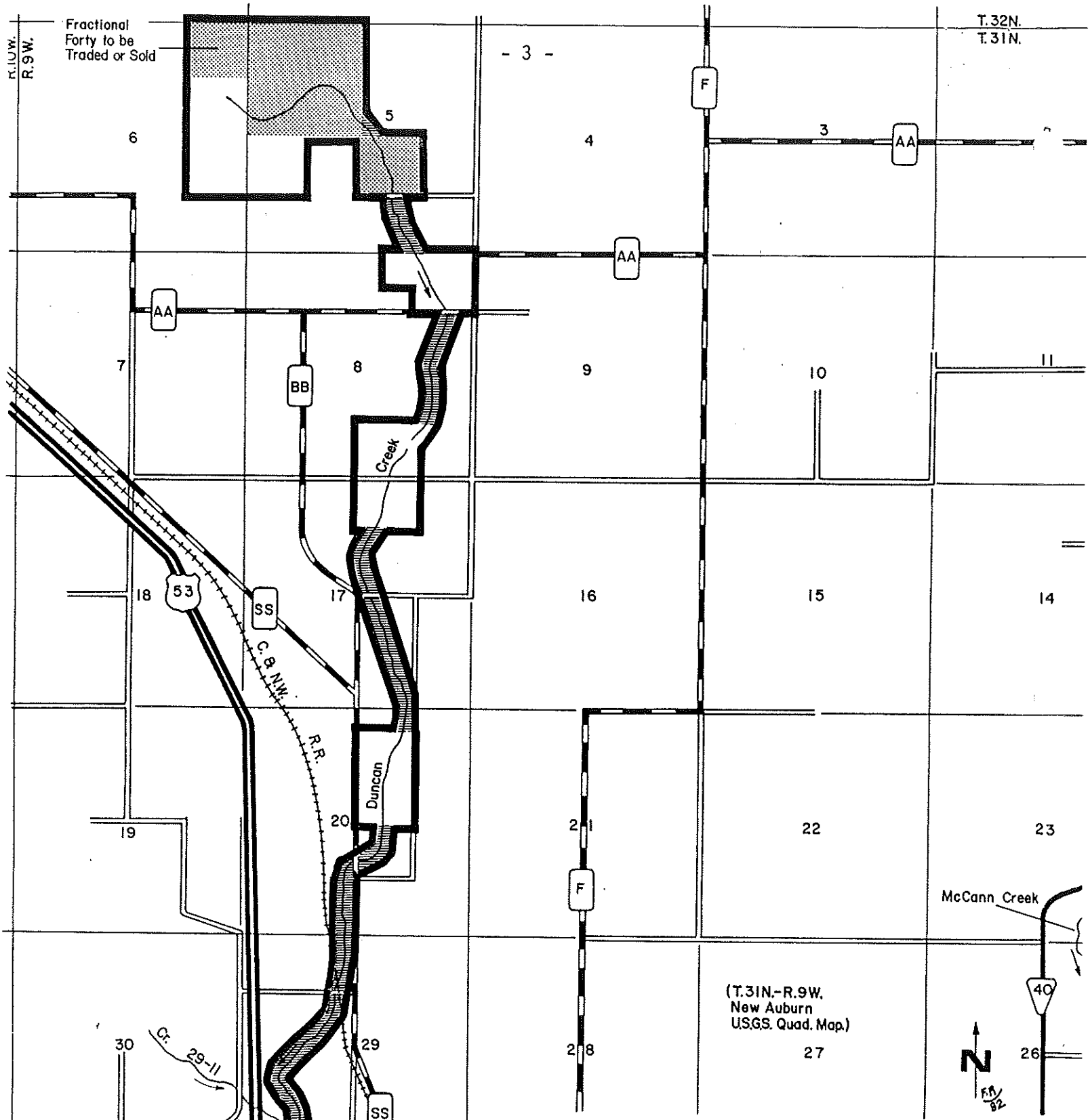
Acquisition will continue from willing sellers within the boundary through 10-rod perpetual easements or fee title purchases, until the acreage goal is met (Figure 2). Acquired parcels will be protected, developed, maintained and their fishery monitored as they become available.

The primary purchase method will be perpetual easements, although fee title purchase or trades would be acceptable. Current Natural Resources Board policy suggests easements be 150 feet on each bank of the stream. The figures included in this plan define a boundary line that is generally larger than that suggested for purchase (Figure 2). This allows some flexibility for the Department and the landowners to account for specific needs of both through negotiations. Although the Department recommends purchase of 150 feet on both banks, in reality, easements may have to be taken for 4-10 rods on each bank or for fee title purchases for larger blocks of land.

As acquisition continues through easement on pastured lands, streambanks will be fenced, where needed, at an estimated cost of $6,000 per mile (Figure 3). Since approximately 75% of the Duncan Creek watershed is used for agriculture, 1.4 miles (2.7 miles on both banks) of streambank may ultimately have to be fenced, pending future land use.

Subsequent construction of one cattle crossing, machinery crossing or watering hole per 0.25 mile of stream purchased may have to be developed, along with the fencing at a cost of $1,000 each. One parking lot will be constructed near the north end of the fishery area on fee title land. It would provide parking for 10 cars at a cost of $1,500.00 (Figure 3).

Following fencing, future fisheries management will include instream development using wing dams, boom covers, and riprap on eroding banks, half-logs and streambank brushing where suitable and necessary (Figure 3). The estimated cost for intensive habitat work is $32,000 per mile, half-logs at $8.00 each and $3,000 per mile for streambank brushing. Applications will be submitted for the use of trout stamp funding to complete the work where needed.



DUNCAN CREEK FISHERY AREA

Scale 0 2640 5280 Feet

Figure 2. Property Ownership and Land Use Classification Map.

LEGEND

Present Approved Boundary
State Land (Fee Title)
State Easement
Private Land
Fish & Wildl. Mgt. Area-RD$_2$--Entire Property
Class I Trout Water ----Entire Stream

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SECTION I - ACTIONS

GOALS, OBJECTIVES AND ADDITIONAL BENEFITS

GOALS

To manage the Duncan Creek Fishery Area in Chippewa County for the benefit of present and future generations in a manner that maintains and improves animal and plant resources, as well as the aesthetics of the waterway while providing an opportunity for quality public use.

ANNUAL OBJECTIVES

1. Manage the trout fishery to provide opportunities for 3,000 participant days of fishing for brook trout with an average catch of 1.0 trout per angling hour.

2. Manage the aquatic resource to supply an average standing crop of 80 pounds of brook trout per acre each fall.

3. Provide opportunities for 165 participant days of hunting for white-tailed deer, waterfowl, grouse, rabbits, squirrels and woodcock and 110 participant days of trapping for mink, muskrats, beaver and raccoons.

ANNUAL ADDITIONAL BENEFITS

1. Manage uplands and associated timber types to maintain aesthetic values and enhance the stream corridor and wildlife habitat.

2. Provide 900 participant days of other recreational and educational activities, including sightseeing, nature study, berry and mushroom picking, photography, bird watching, hiking and snowshoeing.

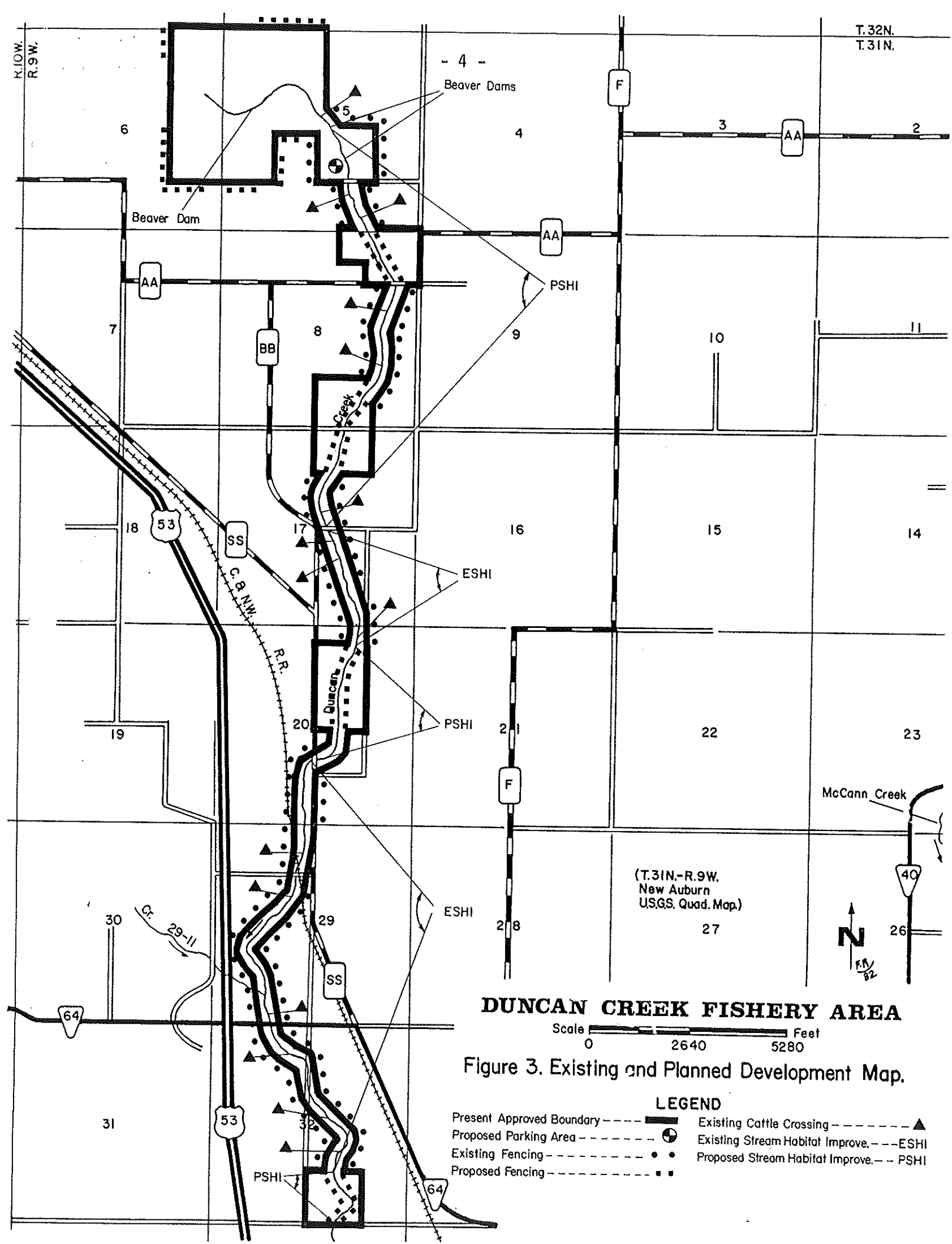
3. Contribute to the habitat of endangered and threatened species.

4. Benefit plants and nongame species indigenous and transient to the area.

RECOMMENDED MANAGEMENT AND DEVELOPMENT PROGRAM

The recommended management and development program for the Duncan Creek Fishery Area, Chippewa County (Figure 1), is designed to improve angler opportunities for a quality trout fishing experience. All past acquisition on Duncan Creek has been through the Chippewa County Fishery Remnant program. It is recommended that these remnants be used, with a boundary, to be the keystone to a proposed Duncan Creek Fishery Area which would include the entire length of trout water and the adjacent lands necessary to provide a buffer zone. At present, acquisition is 70% complete within the proposed boundary.

If the proposal to create the Duncan Creek Fishery Area is approved by the Natural Resources Board, the following actions will be necessary:



DUNCAN CREEK FISHERY AREA

Scale 0 2640 5280 Feet

Figure 3. Existing and Planned Development Map.

LEGEND

- Present Approved Boundary
- Proposed Parking Area
- Existing Fencing
- Proposed Fencing
- Existing Cattle Crossing
- Existing Stream Habitat Improve. ESHI
- Proposed Stream Habitat Improve. PSHI

Current and future needs will include property surveillance and maintenance. An estimated 75 man-days per year will be required for sign posting, for the control and removal of the highest beaver population on record, for cattle crossing repair and streambank fence maintenance. This will cost an estimated $160 per mile of stream.

Stream survey work evaluating fishery response to habitat improvement will continue on a regular basis every 10 years on stream sections under state control to determine trends in the fish population.

Because the fishery area consists primarily of 4 rod perpetual easements, management for wildlife and forestry is limited. Wildlife development areas are primarily "edge" sites adjacent to the stream. Woodduck houses will be added by sportsmen's groups where recommended. Vegetation succession may have a minor effect on small nongame mammals, but is not expected to significantly reduce the productivity of these areas for wildlife in the next 10 years. Any trees that may provide cavities and food sources for wildlife should remain in a natural state.

Due to the small size of the perpetual easements, forestry practices are also restricted and should be managed for aesthetic values. Forestry management would logically occur on fee title property including tree planting and timber sale activities.

In general, the forested areas are too small and have extremely poor access which makes forest management for commercial timber production a low priority goal. Aspen and white birch pole timber will be left to reach maturity and will then be clearcut on small 5-acre patches to regenerate the aspen type for use by wildlife such as deer and grouse starting in 1986. These patches will be cut at 3-year intervals to spread out the age class of the aspen and to create more edge effect for wildlife. No two adjacent 5-acre patches will be cut in the same 3-year period. This cutting will continue until all of the timber is felled on all patches and will not be repeated until each patch reaches maturity (age 43). This cutting will be done by game management crew, or as a project to benefit wildlife by a local sportsmen's club.

Two stands (40 acres total) will be allowed to continue growing as swamp hardwoods. Approximately 7 acres of grass upland will be planted to 3-year old red pine seedlings at a spacing of 6' x 7' (7' between rows of trees). The sod will be scalped at the time of planting the trees by machine.

If the fractional 40 (32.24 acres) is not traded by 1994, it will be retained and planted to red pine.

All areas proposed for development will be examined for the presence of endangered and threatened wild animals and wild 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.

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.

SECTION II - SUPPORT DATA
BACKGROUND INFORMATION

The proposed Duncan Creek Fishery Area is located in west central Wisconsin, or more specifically, in northwest Chippewa County (Figure 1). Duncan Creek is a medium-sized brook trout stream that flows in a southerly direction through an intensively farmed watershed. After leaving the fishery area, it flows through Como Lake, Tilden Pond, and Glen Loch Flowage before it merges with the Chippewa River just below the Chippewa Falls Flowage Dam. It eventually flows into the Mississippi River.

Within the fishery area, the stream is bordered by a narrow strip of wetland, tag alder and open marsh for its entire distance. The areas surrounding the wetlands are primarily agricultural, a combination of dairy and cropland production.

Duncan Creek has long been recognized as one of the most popular and best natural reproducing brook trout streams in Chippewa County. It sustains moderate to heavy angler use from local residents in the Chippewa Falls-Eau Claire areas which are only 25-30 miles away. Because of the need to protect this, and other cold water streams in the county, the Chippewa County remnant program was initiated and approved by the Natural Resources Board in 1961. The first easement was taken in 1962, and the majority of the parcels for the proposed Duncan Creek Fishery Area were secured from 1962 through 1966. One parcel was added in 1972 and the last two in 1978. To date the fishery area has 214.50 acres in fee title land and 110.42 acres in perpetual easements. An additional 135.26 acres will have to be added to complete the property with four, 10-rod easements and/or fee title blocks.

The proposed acreage goal of the Duncan Creek Fishery Area is 460.18 acres. The acreage goal was established by adding fee title land of 214.50 acres and 110.42 acres of 4-rod easements, plus 80.0 acres and 55.26 acres transferred from the Eau Claire County and Chippewa County remnant programs, respectively.

Acquisition of the property is now 70.7% complete with 324.92 acres under permanent control and 135.26 acres remaining to be acquired. Public access to the stream is good. Most of the access to Department easement and fee title lands is from 9 road crossings over the stream.

Management activities of the area have focused on streambank protection and instream habitat improvement (Figure 3). As parcels were purchased within areas that were grazed, fences and crossings were constructed to restrict cattle from streambanks. Approximately 12 miles of fence and 15 cattle and machinery crossings have been constructed and maintained along 6 miles of stream since 1963.

Instream habitat improvement began in 1964 and was completed by 1967. A total of 64 boom covers, 84 wing dams, and 10 riprap and channel cutoffs were completed during this time span. The work extended from the NWSE of Section 32 through the NESW of Section 20. An experimental brushing project was completed through a 1/2 mile section in 1982 using Trout Stamp funding. This area is located in the W1/2 SE1/4 of Section 17 and extends into the NWNE of Section 20 where tag alders were brushed on one or both sides of the creek. A study to evaluate the stream response to brushing will be initiated as time and funds permit.

The stream was stocked annually with brook trout from 1962 until 1974. Surveys then indicated an excellent native trout population was present, and stocking was discontinued.

RESOURCE CAPABILITIES AND INVENTORY

Geology and Soils

The soils in the proposed Duncan Creek Fishery Area developed in organic deposits in the upper reaches of Duncan Creek, and silty deposits over sandy loam glacial till in the northern parts to the southern boundary of Section 20. The soils south of this line developed from outwash sands and gravel.

The stream starts in an area of Seeleyville and Beseman muck, and for the remainder of the course flows through Fordum loam, a very poorly drained mineral alluvial soil. The outwash terrace soils are Sattre loam; Meridian loam moderately well drained; Rib silt loam; Shiffer loam; Warman mucky loam; Billett sandy loam; Billett sandy loam moderately well drained; Meridian loam; Onamia loam; Chetek sandy loam; Halder loam; Rosholt sandy loam; Scott Lake loam; Rosholt variant sandy loam; and Mahtomedia sandy loam. These soils formed in loamy deposits over sand and gravel or sandy outwash.

Permeability ranges from moderate to very rapid. Drainage ranges from very poor to excessive. The slope ranges from 0 to 12 percent and is predominantly 0 to 2 percent. About 20 percent of these soils are prime farmland. They are: Sattre loam; Meridian loam moderately well drained; Shiffer loam, where drained; Meridian loam; Onamia loam; Halder loam, where drained; Rosholt sandy loam; Scott Lake loam; and Rosholt variant sandy loam.

The upland glacial till soils are Freeon silt loam and Magnor silt loam. Drainage ranges from somewhat poor to moderately well drained. Permeability is moderate to moderately slow. Slope ranges from 2 to 12 percent and is predominantly 2 to 6 percent. About 90 percent of these soils are prime farmland. They are Freeon silt loam, 2 to 6 percent slopes and Magnor silt loam. Approximately 121 acres or 25% of the acres within the boundary are prime agricultural land.

Fish and Wildlife

The proposed Duncan Creek Fishery Area has a diversified fish population comprised of 16 species. Most common of these are brook trout, white suckers, common shiners and creek chubs. Other species include golden shiners, Johnny and fantail darters, pearl dace, mudminnows, blacknose dace, mottled sculpins, brook sticklebacks, brook lampreys, and redside dace. Two warmwater species, yellow perch and largemouth bass, are also found in the lower reaches of the stream, probably having migrated into Duncan Creek from Como Lake, a warmwater pond within the city limits of Bloomer below the fishery area boundary. Management is directed at brook trout which are abundant, although slow growing.

An electrofishing survey was conducted during August, 1978 to sample the fish population in three stream sections of state-controlled land located in the upper third of the fishery area. Results of that survey indicated a fish population dominated by brook trout ranging from 2.0 to 14.4 inches total length. Population estimates ranged from 2,123 to 3,280 trout per acre with a total biomass estimated at 99 to 116 pounds per acre. The population of legal size brook trout averaged 480 fish and 74 pounds per acre. Natural reproduction of this species is excellent and no stocking is necessary. Duncan Creek is classified as Class I brook trout water from the headwaters to the last road crossing above Como Lake.

Game species present in the Duncan Creek Fishery Area consist of white-tailed deer, ruffed grouse, cottontail rabbits, grey squirrels, snowshoe hares, red foxes, raccoons, muskrats, mink, beaver and otters as year-round residents. Migratory birds, including woodcock, wood ducks, blue-winged teal and mallards may normally be encountered from April through October. Black bear and coyotes may occasionally be reported. Nongame species include song birds and small mammals indigenous and transient to west central Wisconsin.

Opportunities for hunting and trapping are limited to those parcels acquired in fee title. Where parcels involve only 66 feet on each side of the stream, the value and opportunity for hunting is extremely limited due to the probable necessity of trespass outside the controlled boundaries to retrieve game and in some cases the close proximity of the parcel to occupied dwellings. Hunting and trapping will not be significant uses of the area due to the reasons cited above, and also because land rights obtained by perpetual easements do not include these activities.

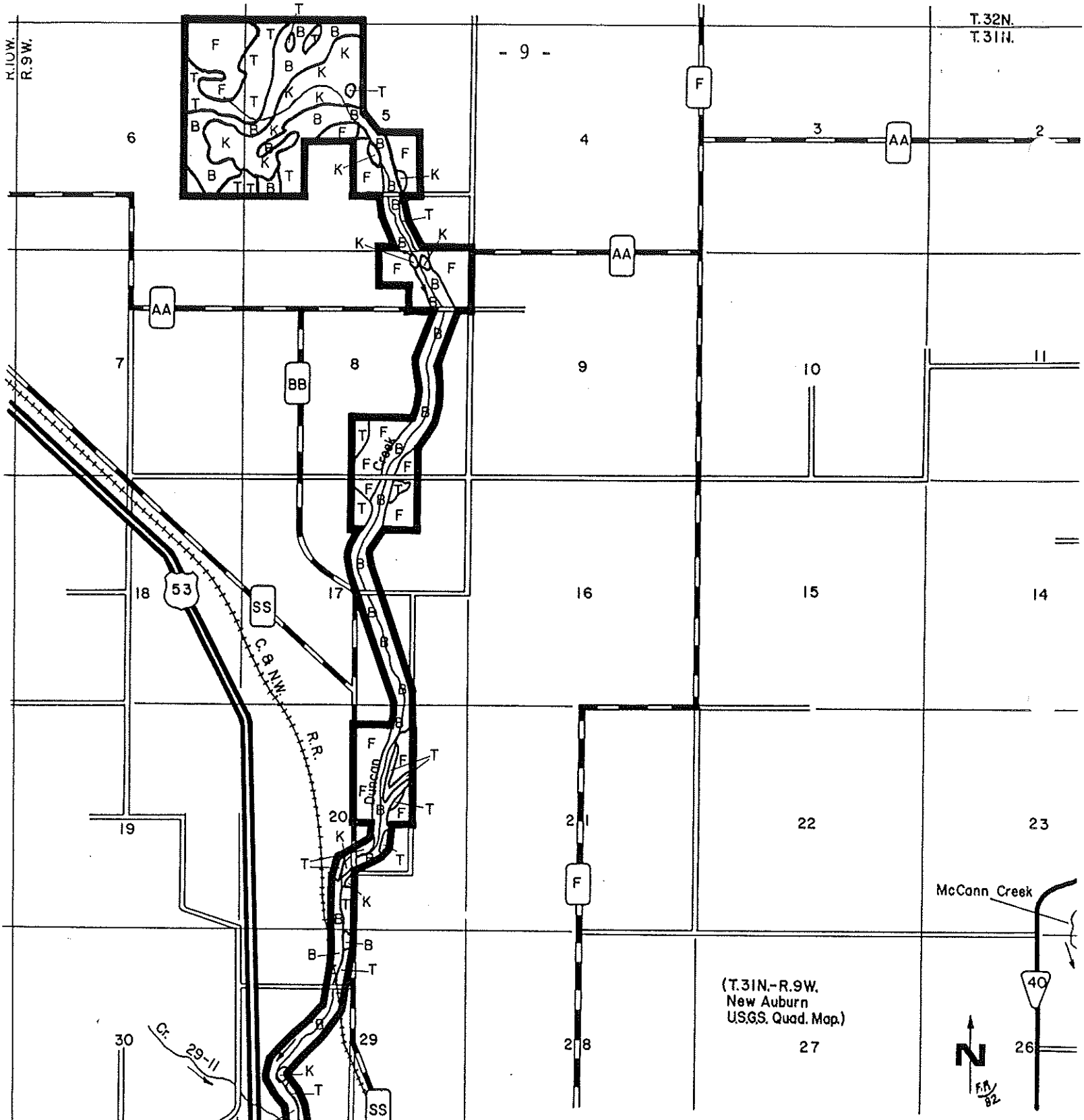
At the present time, no intensive surveys of songbirds, amphibians or reptiles have been made. Observations will continue to be made by trained personnel to compile complete lists of the various species.

Vegetative Cover

All fee title lands located in the NW1/4 and NWSE of Section 5 and the NENE of Section 6, T31N, R9W were inspected to determine the vegetative cover present. A summary of the cover types and their acreage follow in Table 1 and Figure 4:

TABLE 1. Forest Cover Types of Fee Title Lands of the Proposed Duncan Creek Fishery Area, Chippewa County.

Type Number	Acres	Map Symbol	Description of Type
1	23.00	SH 0-5"/GG	Elm seedlings overtopping grass
2	19.00	SH 0-5'/GG	Sparse elm seedlings over grass
3	29.00	GG	Grass upland
4	96.50	LBA	Lowland brush, alder
5	21.59	KG	Marsh grasses
6	14.00	A5-11"/LBA	Quaking aspen poletimber over lowland brush
7	12.00	(A)Bw 5-11"'	Aspen and white birch poletimber
Total	215.09		



DUNCAN CREEK FISHERY AREA

Scale 0 2640 5280 Feet

Figure 4. General Cover Map.

LEGEND

Present Approved Boundary — Marsh

Timber — T Farmland — F

Brush — B

None of the proposed tree cutting or planting indicated in the Recommended Management and Development Program Section of this plan will adversely impact the quality of the water flowing in Duncan Creek based on comparable observations made of similar areas.

Endangered and Threatened Species

No endangered or threatened species of fish, amphibians, molluscs, mammals, birds, reptiles or wild plants are known to be present on the property. Bald eagles and ospreys may use the area during seasonal movements. The District Endangered and Threatened Species Coordinator will be contacted for advice should any pertinent species be found and plans will be prepared for their protection.

Surface Water Resources

The permanent stream of Duncan Creek originates in the northwest corner of the Township of Bloomer, Chippewa County, about 1-1/2 miles east of the Village of New Auburn. Above this point, the intermittent streams retain warmwater characteristics as it flows in wet years from an extensive tag alder swamp north and east of New Auburn in the Township of Sampson. The upper reaches of the stream are generally not well meandered, have less gradient and are bordered by wetland areas that occupy the floor of an old glacial spillway. Downstream, the channel is more deeply entrenched in the glacial outwash, creating a moderate gradient with better developed meanders, and limited wetlands due to better drainage.

Duncan Creek is 25 miles in total length and 120 surface acres in size, averages 40 feet in width and 1 1/2 feet in depth. It has an average flow of 52 c.f.s. and a gradient of 14 feet per mile. The water is clear, cold, has a neutral pH of 7.0 and is borderline hard (MPA 38). The bottom is largely composed of sand and gravel with lesser amounts of silt and detritus. Aquatic vegetation consists primarily of Elodea, wild celery, pondweeds, duckweed and several other minor species. Other natural trout cover, such as undercut banks, overhanging grasses and tag alders, some logs and trees are also present.

Because of the soils and geology of this area with its limited watershed, very few feeder streams are present and most are intermittent. One stream that contributes cold water to Duncan is Creek 29-11 (Table 2). It is very small with a flow of less than 1 c.f.s.

TABLE 2. Classifications of Streams Within the Proposed Duncan Creek Fishery Area, Chippewa County.

Name	County	Length-Miles Class I
Duncan Creek	Chippewa	8.5
29-11	Chippewa	0.8
	Total	9.3

Historical, Architectural and Archaeological Features

Lands within the boundary of the proposed fishery area have not been surveyed for historical, architectural or archaeological sites and none have been reported. However, based upon experience elsewhere in northeastern Wisconsin, the State Historical Society believes that the fishery area has a very high probability of containing as-yet undiscovered archaeological materials.

For this reason, they recommend that the Department consult with the State Historical Society prior to the movement of soils or structures for advice.

Ownership

Currently, the proposed Duncan Creek Fishery Area has a total of 214.50 fee title acres that were purchased at a cost of $92,000 and 110.42 acres controlled by perpetual easement purchased at a cost of $21,105.00. All lands were acquired as remnants. The proposed acreage goal is 460.18 acres. At a projected cost of $89,600, 8 privately owned parcels with 135.26 acres remain to be acquired.

Current Use

The Duncan Creek Fishery Area is used primarily by anglers. No creel census data is available, but it is estimated that the proposed fishery area yields 1,500 man days of fisherman use. Trappers, bird watchers, swimmers, hikers, and hunters account for approximately 150 participant days of other recreational uses, well below annual objectives.

The main agricultural enterprise of the farms on the Duncan Creek Fishery Area is dairying. Corn, oats and hay are the principal crops which are grown in rotation on most of the cropland.

The topography on both sides of the creek in the fishery area is relatively flat and rotations used by the farmers do a fairly good job of controlling erosion within the designated area along the creek. Some of the farmers in the watershed area of the creek have applied conservation practices on the steeper land, but certain areas still need upland conservation practices to reduce the amount of erosion on the cropland. At least 3 farmers have installed storage facilities to handle the manure from their dairy herds so they do not need to spread it on the frozen ground.

Conservation practices such as contour strips, grassed waterways, crop rotations, woodland protection, pasture renovation and streambank protection from cattle are the main practices needed in the watershed.

Land Use Classification

The uniform classification system of land uses (Appendix A of the Master Plan Handbook on Pages 80-1 to 80-16) has been used to designate the land use potentials of the Duncan Creek Fishery Area (Figure 2). The parcels owned and eased by the Department and the lands proposed for acquisition within the property boundary are classified as a Resource Development Fisheries and Wildlife Management Area (RD_2) and will be managed accordingly, as outlined in the recommended management and development program section of the master plan. These parcels are generally low wetlands or wooded lands not well suited for agricultural uses. Some lands within the property boundary but outside the 4 to 10-rod corridor adjacent to Duncan Creek have been classified as prime, Class II or III agricultural land depending upon the location. This fishery area proposal does not intend to take these lands out of agricultural use.

Analysis of the fishery area by qualified Scientific Area Preservation Council personnel shows that no portion qualifies as a scientific, scenic or natural area.

MANAGEMENT PROBLEMS

Private Inholdings

Completing the acquisition of public land along the proposed Duncan Creek Fishery Area is a major problem. Contacts have been made with all remaining landowners on numerous occasions, to determine their willingness to sell to the Department or give perpetual easements. The last 3 acquisitions occurred in 1978 and 1972, the rest were secured during the period of 1962 through 1966. Little progress has been made since 1978.

Private Development Encroachments

Development of rural housing within the proposed Duncan Creek Fishery Area could become a major resource management problem. Wild lands and relatively poor farm land are being divided into small plots and sold for residential use. Such developments make management difficult. Problems would include the necessity to acquire small tracts of land, fences along lawns, and public trespass on private property. Currently there are 3 homes within the boundary.

Soils, Sedimentation and Other Pollutants

The soil, generally a sandy loam, has contributed a considerable amount of sedimentation to Duncan Creek through erosion and active streambank slumping. Applied management practices such as riprapping, sloping, seeding, and sodding

has reduced erosion in some areas of steeper topography and these practices are continually encouraged. Manure on most farms is spread daily throughout the winter. Where care is used to spread manure on frozen ground on those fields with little slope, and away from the creek, few nutrients are carried away with spring thaws.

Silt is the one pollutant most apt to enter Duncan Creek from farming practices. Plant nutrients from manure and farm fertilizer could be carried into the creek with silt. Farm pesticides are not heavily used on dairy farms with a good, long-term rotation. Herbicides on corn are the only pesticides that are widely used on Chippewa County dairy farms.

Access and the Lack of Parking Facilities

There are 9 public road crossings within the Duncan Creek Fishery Area. These provide access to the stream and to department-controlled streambanks. Parking along public roads is presently adequate but creates a potential traffic hazard. The construction and improvement of parking lots may be necessary in the future. Parking lots are considered undesirable from the standpoint that they tend to concentrate anglers in the areas immediately adjacent to the parking lot. If parking becomes a problem in the future, it will be dealt with as the need arises.

Beaver Damage to Instream Trout Habitat

Dams, whether built by humans, beaver or by an accumulation of floating debris, are detrimental to trout habitat in most similar low-gradient streams. Water impounded by dams may warm in the summer and cool excessively in the winter during the spawning period and kill deposited eggs. Water upstream above the dam is deeper and may provide a good place for trout to live and grow for a short time but eventually the pond silts and trout disappear. Spawning migrations are also blocked. Beaver management within the property boundary will be designed to achieve minimum populations.

The Effects on Instream Trout Habitat and Water Quality Of Pastured Livestock

Pasturing causes a loss of bank cover by grazing and trampling and results in serious erosion problems. Livestock also cause sloughing of overhanging banks which provide trout cover. The erosion causes siltation resulting in wider, shallower, warmer streams with little cover. Cattle wastes entering the water add unwanted nutrients and decrease water quality. Fencing livestock from trout streams is an effective way of improving water quality and trout habitat. Efforts will continue to gain control and fence pastured lands to restrict cattle use along the stream.

Excessive Woody Streambank Vegetation

Woody streamside vegetation has become excessive in some areas along the fishery area. This leads to poor quality trout habitat and reduced angling. Removing streambank brush to increase sunlight to the stream and regrowth of natural grasses on the banks will increase plant and aquatic invertebrate production instream while reducing erosion. The end result will then be greater fishability and an increased biomass of trout, although it is recognized that streamside brush removal can adversely affect cover for woodcock, woodduck broods and several nongame species.

Timber Harvest and Disease

Mature timber suitable for harvest will be marketed when conditions are favorable, consistent with good fish and game management practices and general aesthetic values bordering the stream. Tree diseases such as Dutch elm, oak wilt, heart rot, and insects such as popple borers exist on Department property. Control of such diseases can only be accomplished with proper silvicultural techniques to eliminate diseased trees, limit logging to certain times of the year or by removing mature timber to leave only the most vigorous, high quality trees. Insect problems are currently of minor importance.

Misuse

Misuse, such as littering is a minor, but an increasingly recurring problem. Increased patrols by law enforcement personnel may be needed in the future.

RECREATION NEEDS AND JUSTIFICATION

Trends in current recreation patterns indicate that people are fashioning their lives more and more after the type of leisure activity they participate in away from work. As a result, there is a need for diversity in the outdoor activities provided for at any given recreational site.

The proposed Duncan Creek Fishery Area will help fulfill some of the Chippewa County and surrounding area's recreational needs. It will be utilized largely by the people of Barron, Chippewa, Dunn, Eau Claire, and Rusk Counties which have a combined population of over 208,150 according to the 1980 Wisconsin Blue Book.

The population trends in Chippewa County and other northern counties are shifting toward urban living. In the period from 1977-1980, cities and villages showed a 6.35% population increase while townships not within any urban area showed a 4.1% decrease. Population distribution projections for the future indicate that the shift to the incorporated communities will continue at a fairly rapid pace.

The impact of these shifts in population distribution will have a significant effect on the recreational resources of the county. In general, rural people create less impact on the recreational resources as they tend to use their own property for some recreational activities. Conversely, people living in the cities and other nonrural areas do not have access to large open spaces and recreational areas must be provided for them.

As the population becomes more concentrated in the cities and villages, more public recreational facilities will have to be provided by various units of government. The Duncan Creek Fishery Area is located within 30 miles of Chippewa Falls, Eau Claire and Menomonie. These cities have a combined population of over 72,869 and are expected to grow rapidly in the future, placing higher demands for diverse recreational facilities.

The Duncan Creek Fishery Area is situated in an area of the state that has quality recreational opportunities available. There are 40 public and privately owned campgrounds in Chippewa County alone. Twenty-three public and private picnic facilities are open to the public with over 1,100 picnic tables available.

Besides the obvious consumptive-use patterns that are already established in the fishery area, namely fishing, other recreational activities may also develop. The area has road crossings making it easily accessible. The heavy vegetation along much of the creek limits good hiking, however, bird watching, nature photography, berry picking and picnicking are available to user groups and individuals.

Other summer recreational activities available in the area include boating, swimming, hiking, pleasure driving and nature study. This present diverse recreational supply will increase the number of recreational consumers in the area and help provide additional usage to the Duncan Creek Fishery Area.

Fishing

According to the 1981 Wisconsin Outdoor Recreation Plan, surface water resources in Wisconsin's Region 11, which includes Chippewa, Eau Claire and Clark Counties, are below the state average on a per capita basis. Chippewa County contains the majority of Region 11 waters, which in turn accentuates the deficiencies in Eau Claire and Clark Counties. The region contains a little less than 3% of the state's total surface water area, and Chippewa County contains 80% of the region's water.

The Wisconsin Outdoor Recreation Plan emphasizes that governmental agencies must be committed to securing lake and river frontage wherever it is available, and protecting and improving the quality of the waters to accommodate increased fishing participation.

Surface water resources of 450 lakes and 61 named streams comprising 21,037 surface acres in Chippewa County provide ample fishing opportunities. Only 45 of the 183 named lakes do not have populations of gamefish. Trout fishing is excellent in the county on streams managed for this purpose. Twenty-one streams extending 74 miles are designated as trout water.

A total of 12,636 fishing and 4,987 sport licenses were sold in the county in 1983. Of these numbers, 4,204 of the licenses were purchased by nonresidents, an indication that the county's fishing resource attracts many tourists in the area, particularly from the Twin Cities, Minnesota, with their population of 1.5 million people. A total of 2,501 trout stamps were sold in Chippewa County in 1983. Fishing supply, demand and needs estimates indicate the improvement and development of existing fishery facilities are currently more important than the development of new waters. Protection of fishery habitat and availability of access should be priority management goals to meet the anticipated 15% increase in the number of recreational outings by 1990.

Wildlife

Currently, about 4,500 acres of land are available as public hunting grounds in the county. The concept of multiple-use incorporated into the management of the 32,000-acre Chippewa County Forest allows for the propagation and harvest of big and small game species. An active timber harvest program has proven beneficial to wildlife.

In addition to public lands, there are over 3,700 acres of privately-owned forest crop lands in small scattered tracts throughout the county. These lands, by state law, are open to public hunting. Despite large tracts of land available for public hunting, most hunting is done on privately-owned land. Pheasants, squirrels and rabbits are products of farm fields and woodlots. Farm woodlots are also popular for deer hunting.

The latest analysis of license sales indicates 18,575 county residents purchased some type of hunting license. Hunting participation demand projections indicate the number of annual recreation occasions will increase from 155,649 in 1976 to 169,312 in 1990, an approximate 8% increase. In general, there is a large supply of hunting land in the county. The problem is to make it available for public use. Hunting will not be a major consumptive activity on the Duncan Creek Fishery Area because land rights purchased by perpetual easements do not include hunting.

During the past five years, Chippewa County has ranked among the top producing counties in the state in beaver and otter harvest; future estimated trapping demands are expected to remain fairly stable. Trappers are territorial in their sport and one or two persons may be the only users of the area within the boundary of the Duncan Creek Fishery Area. Future easements of land within the property boundary will assure the protection of furbearer habitat.

Other Recreational Uses

Attractive physical features in Chippewa County form the background for a wide variety of recreational development and activities. The growing outdoor activities include water-based recreation, cross-country skiing, snowmobiling and nature study.

The Chippewa Moraine Ice Age National Scientific Reserve Unit will in the future offer day-use recreational facilities, overlooks, hiking trails, boating and backpacking campsite facilities. Two state parks, Brunet

Island and Lake Wissota, are also located in Chippewa County. Brunet Island State Park is located 19 miles east of the City of Bloomer, just north of State Highway 64. Located adjacent to the Chippewa River, the park offers camping, boating, swimming, and hiking facilities. Lake Wissota State Park is located 10 miles south of the Duncan Creek Area, northeast of the City of Chippewa Falls on Lake Wissota. Camping (76 sites), boating, swimming, picnicking, hiking, interpretive, cross-country skiing, and snowmobile facilities are available at the park.

Sixteen other county and private campgrounds are located throughout the county, including Morris Erickson County Park just east of State Highway 40 on Long Lake about six miles north of the Duncan Creek Fishery Area. This park offers 30 campsites, boating and picnicking facilities. The number of persons participating in nature study, bird watching, berry picking, and photography activities has not been determined accurately enough to generate adequate supply and demand data. However, it is known that these uses do occur and that the activities are increasing.

ANALYSIS OF ALTERNATIVES

Do Nothing

One alternative is to do nothing and to leave the fishery area as it presently exists. This would leave many acres of privately owned land without public access or streambank protection. Deterioration of trout habitat would occur in future years. Tag alder would continue to encroach into the stream channel causing habitat deterioration. Existing and future erosion problems would go uncorrected. Siltation would decrease the overall depth of the stream, fill in holes and cover spawning beds. The fishery resource as a whole would be diminished.

Reduce the Property

Approximately 70% of the lands necessary to achieve the present property goals are already in state control. Attainment of the goals would be impossible if the area was reduced.

Limited Habitat Management

Limited management of the fish and wildlife resource would result in at least a "status quo" and is necessary to maintain the present resource and prevent deterioration, particularly of the trout population. Brushed areas of the streambank would have to be maintained to prevent re-establishment of tag alders, and instream devices would need periodic maintenance. Parking lots and access would require repair. Limited habitat management would not substantially increase the carrying capacity of fish.

Continue the Existing Management Program

Various programs have been initiated in and along Duncan Creek since 1961. They consist of the following:

1. Land acquisition for public access, stream protection and improvement.

2. Streambank fencing and cattle/machinery crossing development.

3. Instream habitat improvement and streambank brushing.

4. Management for minimal beaver populations.

5. Regularly monitor fish populations.

Establish the Duncan Creek Fishery Area (Recommended Alternative)

It is recommended that the Natural Resources Board establish the Duncan Creek Fishery Area with an acreage goal of 460.18 acres. When all lands are acquired, this would provide opportunities for 3,000 participant days of fishing for brook trout, 165 participant days of deer hunting and 110 days of trapping. It would also allow for the management of an average standing crop of 80 pounds of brook trout per acre. Most importantly this alternative would provide for a permanent program of protection with specific goals and objectives with details as presented in Section I of this plan.

3699L

APPENDIX - DNR Responses to comments of outside reviewing agencies

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

G. W. Mueller, District Planning Supervisor, Department of Transportation, Eau Claire, Wisconsin

We have reviewed the Master Plan for the Duncan Creek Fishery Area in Chippewa County and offer the following comments:

1. We currently do not have improvement planned for State Trunk Highway 64, in the Duncan Creek area, which would require additional right of way. On-going maintenance activities however, may require full use of the existing right of way. We recommend that any land acquisition activities effecting S.T.H. 64 right of way be coordinated with this office.

   DNR Response: Agreed

2. We also recommend that your land acquisition activities affecting county trunk highways or town roads be coordinated with the appropriate officials in those governments.

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

   DNR Response: Agreed

Stanley A. Nichols, Wisconsin Geological and Natural History Survey, Madison, Wisconsin

P. 2, par. 2 & P.6, par. 4. - There seems to be confusion and no good definition of how stream miles are involved in the project. One place quotes needed fencing, the other fencing already in place. One would be led to believe the total project is 9 weeks?

DNR Response: Table 2 addresses how many stream miles are in the fishery area. The 2 paragraphs you mention discuss the miles of stream that may need to be fenced and what is currently fenced.

P. 2, par. 4 - How many miles of intensive habitat work is proposed?

DNR Response: Refer to Figure 3.

P. 2, par. 5 - 75 man days per year for the activities outlined seems excessive. That's one full time person working all summer to post sign and repair fences.

DNR Response: Many of the fences are several years old, requiring considerable maintenance. That, combined with the highest beaver populations on record, and the need to control them, have elevated the maintenance load to this degree.

P. 5, par. 5 - Statement on land cover (75% forested) does not coincide with the statement on page 2, par. 2 that 75% is used for agriculture. Need better definitions.

DNR Response: Thanks for pointing out this source of confusion. The sentence on page 5 should be removed.

P. 6 - Geology & Soils. These statements in most of the reports are "boiler plate" and generally useless to management decisions. How does the soil and geology information relate to the management objectives.

DNR Response: Background information is addressed in this section of the plan. This, of course, leads us to the conclusion and reality that these kinds of soils and geology contribute to the quality of the stream and make good agricultural lands. The type of agriculture here can cause damage and hence the area needs protection and management for the stream to provide the fish and fishery aspired to in the objectives and benefits.

Jim Dahl, Wisconsin Conservation Congress, New Auburn, Wisconsin 54757

With regard to the portion of Duncan Creek laying in the north half of Sec. 17: the stream thread in this area is quite straight and consequently shallow with no appreciable trout cover. Perhaps some instream work would be an asset to this area.

DNR Response: Agreed

Forest Stearns, Chairman, Scientific Areas Preservation Council

We have reviewed the Duncan Creek Fishery Area concept master plan and find that the proposed goals, objectives, and development will not affect our program interests.

Thank you for providing opportunity to comment.

Dick Lindberg, DNR Liaison, Wild Resources Advisory Council

This property has no potential for wild resource designations according to the Wild Resources Advisory Council.

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For All DNR Type II Actions, Except Adm. Rules
FORM 1600-1 REV. 3-82

Note: (This revision combines Form 1600-1 and 1600-2 into one form.)

DEPARTMENT OF NATURAL RESOURCES

DISTRICT OR BUREAU
West Central
DOCKET NUMBER
TYPE LIST DESIGNATION(S)

ENVIRONMENTAL ASSESSMENT

(ATTACH ADDITIONAL SHEETS IF NECESSARY)
(REFERENCE INFORMATION SOURCES UTILIZED)

Applicant: Wisconsin Department of Natural Resources

Title of Proposal: Duncan Creek Master Plan

Location: County Chippewa
Township 31 North, Range 9 ~~East~~, West
Section(s) 5, 6, 8, 17, 20, 29, 32
Political Town Bloomer

PROJECT SUMMARY

1. General Description (brief overview)

The master plan for the proposed Duncan Creek Fishery Area presents the long-range goals and objectives for the proposed management of this property. The plan is designed to project management and budget proposals for at least the next ten years. Major actions proposed in the plan are as follows:

1. Establish the Duncan Creek Fishery Area with a property boundary and acreage goal of 460.77 acres.
2. Acquire 135.85 acres within the boundary.
3. Sell or trade one short forty (31.65 acres) that exists within the boundary.
4. Transfer 80 acres from Eau Claire County Remnant Acres to the Duncan Creek Fishery Area.
5. Reduce the Eau Claire County Remnant Acres by 80 acres.
6. Transfer 55.85 acres from Chippewa County Remnant Acres to the Duncan Creek Fishery Area.
7. Reduce the Chippewa County Remnant Acres by 55.85 acres.
8. Manage the aquatic resources by fencing, instream devices, riprap and brush control utilizing herbicides and mechanical removal.
9. Conduct a forest management program.
10. Provide upland wildlife habitat management.

11. Continue beaver control program.

12. Provide additional parking areas as needed.

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

This master plan has been prepared under the guidelines of the Master Planning Handbook and Manual Code 2105.1. Master plans are established to assure sound, long-range comprehensive planning for all department-owned lands. Goals and objectives for management of the property are established for public review, comments, and as an aid for the Department of Natural Resources in its budgeting and management decision making process. Duncan Creek has long been recognized as one of the most popular and best natural reproducing brook trout streams in Chippewa County. It sustains moderate to heavy angler use from local residents in the Chippewa Falls - Eau Claire areas which are only 25-30 miles away. Because of the need to protect this cold water fishery, the Chippewa County Remnant program was initiated and approved by the Natural Resources Board in 1961. The first easement was taken in 1962, and the majority of the parcels for the proposed Duncan Creek Fishery Area were secured from 1962 through 1966. One parcel was added in 1972 and the last two in 1978. To date the fishery area has 214.5 acres in fee title land and 110.42 acres in perpetual easements. An additional 135.85 acres will have to be acquired to complete the property with 4-10 rod easements and/or fee title blocks.

3. Authorities and Approvals (list statutory authority and other relevant local, state and federal permits or approvals required).

Wisconsin Statutes 23.09 and 30.12, Wisconsin Administrative Codes NR 1.51 and NR 80. District Director approvals are required for actions requiring Chapter 30 permits. Natural Resources Board approval required for the plan. D.N.R. administrative approval required for timber sales.

4. Estimated Cost and Funding Source

Project total acquisition cost is $89,600.00 with an average annual increase of 15%. New streambank fencing as needed - $32,400.00 for 5.4 miles. Eleven new cattle crossings at a cost of $11,000.00. Intensive instream habitat improvement $104,000.00 for 3.25 miles of stream. Streambank brushing $3,000.00 for 1 mile. Land maintenance, $960.00 annually on six miles of stream. One parking lot will be constructed at a cost of $1,500.00. Grand total estimated cost will be $241,500.00 plus annual maintenance costs. Funding sources are expected to be derived from hunting and fishing license sales, state trout stamp revenue, O.R.A.P. and federal funding (Dingle-Johnson).

PROPOSED PHYSICAL CHANGES

5. Manipulation of Terrestrial Resources (include relevant quantities - sq. ft., cu. yds., etc.)

The following are actions that may result in terrestrial resource manipulations: 1) Fence construction - approximately 5.4 miles of fence may be constructed. Some mechanical brush removal will occur within portions of the fence corridor

(usually one rod in width). 2) One parking lot with an estimated dimension of 150' x 40' will result in the disturbance of 6,000 sq. ft. of grading and surfacing with crushed rock or gravel. Approximately 100' of entrance road to the lot will require grading and surfacing of an additional 1,200 sq. ft. 3) A maximum of 400,000 ft. of stream frontage may be mechanically brushed with subsequent chemical stump treatment with Ammate XNI or Krenite to prevent resprouting.

6. Manipulation of Aquatic Resources (include relevant quantities - cfs, acre feet, MGD, etc.)

Construction of cattle watering areas or crossings will involve some instream use of heavy equipment such as bulldozers and backhoes. The stream bottom may be excavated to remove silt and muck where needed and this material replaced with rock and gravel to original streambed dimensions. Usually this work is done on an area of stream to a width of 3-4 rods and extending across the stream. Approximately 11 of these areas will be constructed. Instream improvement will involve the construction of boom covers, rock riprap deflectors and half logs. Streambanks will be shaped where needed with bulldozers. Boom cover supports will be jetted into the stream bottom. The stream surface area will be reduced by approximately 30% in the construction area. Temporary stream siltation will occur during construction. Temporary land roads will cause some soil disturbances. All work will be sloped, fertilized and reseeded to stabilize the banks. Instream depth will be increased and some bottom scouring at the structure sites is expected to occur. Beaver dams will be removed when possible to prevent cold water habitat damage. Dams will be removed by hand or by explosives by a licensed blaster. The stream bottom of the dam site may be disturbed by the use of explosives.

7. Buildings, Treatment Units, Roads and Other Structures

Streambank improvement will include fencing and cattle crossings where suitable and necessary. Instream structures will include wing dams, boom covers and rip-rap on eroding banks, half logs and streambank brushing. Placement will be as determined necessary. Chemical stump treatment and spot maintenance spraying will be necessary for an anticipated five acres of streambank brushing. Ammate X-NI or Krenite, both approved for use near water, will be used according to label instructions and applied by backpac sprayer. Temporary roads will either be seeded after use or allowed to vegetate naturally. They will be blocked to prevent vehicular use.

8. Emissions and Discharges

The only anticipated emissions that will occur are vehicle and heavy equipment exhaust. Due to the limited scope of their use, no measurable air quality changes are expected to occur. No discharges are proposed.

9. Other Changes

None.

10. Attach Maps, Plans and Other Descriptive Material as Appropriate (List)

Duncan Creek Fishery Area Master Plan - Concept Element.

Information Based On (check all that apply):

- ☐ Literature/correspondence
- ☐ Personal Contacts (list in item 31)
  Field Analysis By: ☐ Author, ☐ Other (list in item 31)
  Past Experience With Site By: ☐ Author ☐ Other (list in item 31)

11. Physical (topography - soils - water - air - wetland amounts and types)

Topography and Soils

The topography on both sides of the creek in the Fishery Area is relatively flat and rotations used by the farmers do a reasonably good job of controlling erosion within the designated area along the creek. Some of the farmers in the drainage area of the creek have applied conservation practices on the steeper land, but there still remains certain areas of the watershed that need upland conservation practices on the land to reduce the amount of erosion of the cropland. At least three farmers have installed manure storage facilities to handle the manure from their dairy herds so they do not need to spread manure on the frozen ground.

Conservation practices such as contour strips, grassed waterways, crop rotations, woodland protection, pasture renovation and streambank protection from cattle are the main practices needed in the watershed.

The soils in the proposed Duncan Creek Fishery Area developed in organic deposits in the upper reaches of Duncan Creek, and silty deposits over sandy loam glacial till in the northern parts until the southern boundary of Section 20. The soils south of this line developed from outwash sands and gravel. The stream starts in an area of Seelyeville muck and Beseman muck. The stream flows through Fordum loam the remainder of the course, a very poorly drained mineral alluvial soil. The outwash terrace soils are Sattre loam; Meridian loam moderately well drained; Rib silt loam; Shiffer loam; Warman mucky loam; Billett sandy loam; Billett sandy loam moderately well drained; Meridian loam; Onamia loam; Chetek sandy loam; Halder loam; Rosholt sandy loam; Scott Lake loam; Rosholt variant sandy loam; and Mahtomedia sandy loam. These soils formed in loamy deposits over sand and gravel or sandy outwash. Permeability ranges from moderate to very rapid. Drainage ranges from very poor to excessive. The slope ranges from 0 to 12 percent and is predominantly 0 to 2 percent, about 20 percent of these soils are prime farmland. They are Sattre loam; Meridian loam moderately well drained; Shiffer loam, where drained; Meridian loam; Onamia loam; Halder loam, where drained; Rosholt sandy loam; Scott Lake loam; and Rosholt variant sandy loam. The upland glacial till soils are Freeon silt loam and Magnor silt loam. Drainage ranges from somewhat poor to moderately well drained. Permeability is moderate to moderately slow. Slope ranges from 2 to 12 percent and is predominantly 2 to 6 percent. About 90 percent of these soils are prime farmland. They are Freeon silt loam, 2 to 6 percent slopes and Magnor silt loam. Approximately 121 acres of 25% of the acres within the project boundary is prime agricultural land.

Surface Water Resources

The permanent stream of Duncan Creek originates in the northwest corner of the Township of Bloomer, Chippewa County, about 1 1/2 miles east of the Village of New Auburn. Above this point, the intermittent stream retains

warm water characteristics as it flows in wet years from an extensive tag alder swamp north and east of New Auburn in the Township of Sampson. The upper reaches of the stream are generally not well meandered, have less gradient and are bordered by wetland areas that occupy the floor of an old glacial spillway. Downstream the channel is more deeply entrenched in the glacial outwash, creating a moderate gradient with better developed meanders, and limited wetlands due to the better drainage.

Duncan Creek is 25 miles in length and 120 surface acres in size, averages 40 feet in width and 1½ feet in depth. It has an average flow of 52 c.f.s. and a gradient of 14 feet per mile. The water is clear, cold, neutral pH and borderline hard (M.P.A. 38). The bottom is largely composed of sand and gravel with lessor amounts of silt and detritus. Aquatic vegetation consists primarily of elodea, wild celery, pondweeds, duckweed and several other minor species. Other natural trout cover, such as undercut banks, overhanging grasses and tag alders, some logs and trees are also present.

Because of the soils and geology of this area with its limited watersheds, very few feeder streams are present and most are intermittent. One stream that contributes cold water to Duncan is Creek 29-11 (Table 2). It is very small with a flow of less than 1 c.f.s. and is managed as a forage fish stream. Other intermittent streams which contribute flow on a seasonal basis are 29-5, 20-14, and 17-14.

TABLE 2

Name	County	Length-Mi	Class I - Mi
Duncan Creek	Chippewa	25	8.5
29-11	Chippewa	.8	0
29-5	Chippewa	Intermittent	0
20-14	Chippewa	Intermittent	0
17-14	Chippewa	Intermittent	0

Air

The air quality in the fishery area exceeds the secondary air quality standards as set by the Federal E.P.A. and is indicative of very good quality.

Wetland Types

Wetlands are located throughout the fishery area and are characterized as shrub wetlands in the "Classification of Wetlands and Deepwater Habitats of the United States" from the Fish and Wildlife Service, 1979. These wetlands, totalling 297 acres, are located adjacent to or connected with the stream. They are characterized by alder marshes interspersed with hardwoods and some conifers.

12. Biological

a. Flora - Vegetative Cover.

All fee title lands located in the NW¼ and NWSE of Section 5 and the NENE of Section 6, T31N, R9W were inspected to determine the vegetative cover present. A summary of the cover types and their acreage follow (also refer to "Forest Cover Type Map in the appendix):

Type Number	Acres	Map Symbol	Description of Type
1	22	SH 0-5"/GG	Elm seedlings overtopping grass
2	18	SH 0-5'/GG	Sparse elm seedlings over grass
3	34	GG	Grass upland
4	90	LBA	Lowland brush, Alder
5	20	KG	Marsh grasses
6	13	A5-11"/LBA	Quarking aspen poletimber over lowland brush.
7	11	(A) BW 5-11"'	Aspen and white birch poletimber
	208 ac.		

In general, the forested areas are too small and have extremely poor access which makes forest management for commercial timber production a low priority goal. Forest Types 6 and 7 will be left to reach maturity and will then be clear-cut on small 5 acre patches to regenerate the aspen type for use by wildlife such as deer and grouse starting in 1986. These patches will be cut a three year intervals to spread out the age class of the aspen and to create more edge effect for wildlife. No two adjacent 5 acre patches will be cut in the same 3 year period. This cutting will continue until all of the timber is felled on all patches and will not be repeated until each patch reaches maturity (age 43). This cutting will be done by game managements crew or as a project to benefit wildlife by a local sportsman club.

Stands 1 and 2 (40 acres total) will be allowed to continue growing as swamp hardwood stands. Approximately 7 acres of type 3 will be planted to 3 year old red pine seedlings at a spacing of 6' x 7' (7' between rows of trees). The sod will be scalped at the time of planting the trees by machine in the spring of 1985.

The NENE of Section 6, T31N, R9W will be sold or traded for other lands along the stream, within the project boundary. Any monies received from the sale of this land would be used to purchase other lands within the project boundary as stated above. If these lands are not sold or traded by 1994, the area will be planted to red pine as described earlier.

None of the proposed tree cutting or planting will adversely impact upon the quality of the water flowing in Duncan Creek based on many observations of similar areas.

No endangered or threatened species of flora were found within the fee title lands inspected for this project.

b. Fauna

The proposed Duncan Creek Fishery Area has a diversified cold water fish population comprised of 16 species, which can be found in area files. Most common of these are brook trout, white suckers, common shiner and creek chub. Two warm water species, yellow perch and large-mouth bass, are also found in the lower reaches of the stream.

Natural reproduction of brook trout is excellent and no stocking is necessary. Duncan Creek is classified as Class I brook trout water for the entire length within the fishery area.

Game species present in the Duncan Creek Fishery Area consist of white-tail deer, ruffed grouse, cottontail rabbit, grey squirrel, snowshoe hare, red fox, raccoon, muskrat, mink, beaver and other as year-round residents. Migratory birds, including woodcock, wood duck, blue-wing teal and mallard may normally be encountered from April through October. Black bear and coyote may occasionally be reported. Non-game species include song birds and small mammals indigenous and transient to West Central Wisconsin.

No endangered species are known to reproduce within the fishery area boundaries, but bald eagle and osprey may use the stream during seasonal movements.

13. Social/Economic (include ethnic and cultural groups, and zoning if applicable)

The Sand Creek Fishery Area is in close proximity to 3 large population centers; Eau Claire, Menomonie and Chippewa Falls. Since rapid growth for these cities is projected for the future, there will be a higher demand on the recreational facilities such as the Duncan Creek Fishery Area. This project would help stimulate the incomes of surrounding local shops, taverns and restaurants by providing increased patronage. It will also provide seasonal employment for 4 persons on an LTE basis, generate income for suppliers of materials and will prevent some soil erosion of valuable topsoil from fertile farmlands.

14. Other Special Resources (e.g., archaeological, historical, endangered/ threatened species, scientific areas, natural areas)

Prior to any movement of soils or structures to accomplish proposed objectives on the fishery area, the State Historical Society will be contacted for advice. No endangered 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 species are found, development will be suspended until the District Endangered and Non-game Species Coordinator is consulted, the site evaluated and appropriate measures taken for significant locations.

15. Physical (include visual if applicable)

a. Acquisition of remaining lands will have no direct physical impact on the environment but creates secondary actions that may, such as fencing, habitat improvement, and access development.

b. Access roads for other proposed developments will create temporary soil and plant disturbance. These roads will be necessary for fencing and watering area construction, habitat development, and parking lots. Parking lots will replace existing grassland or wildland.

c. Fencing and cattle watering/crossing areas-fence lines will be brushed and maintained, if possible, as open areas. Cattle watering/crossing areas will have to be cleared, sloped, and graveled, resulting, in some cases, in a conversion of grasses and shrubs to graveled road type areas. Some stream siltation may occur during construction. These developments are expected to be of a long-term nature (20 years plus). Benefits to be derived are the exclusion of livestock from wildlife habitat, prevention of bank erosion by grazing, reduction of livestock related pollution along the stream except for small localized areas, and satisfying legal requirements for boundary fences.

16. Biological

a. Instream development of structures and streambank brushing - impacts may be considered to be both physical and biological, but is considered here because of the anticipated direct and long-term effects on fish and wildlife. During the course of structure development, soil and plant disturbance will occur. Some stream siltation will result from construction. Beneficial long-term impacts will be streambank erosion control and improved instream cover for cold-water fish species. Streambank brushing will include plant removal along the banks. It will also result in a flushing action for silt and organic debris, plus increased sunlight to the stream, which will encourage aquatic vegetation in silted areas. Siltation from construction activity and silts flushed from the stream bottom will, for the most part, be carried downstream and deposited on inside meander banks. Some of the very fine silts may remain in suspension and carried downstream to Como Lake where they may settle out. Secondary benefits of brushing include an increase of instream food supply and exposed gravel bottoms, which are indicators of good trout habitat. Some wildlife species may be adversely affected, such as woodcock, with the conversion of alder to grasses. Conversely, some furbearers and duck species may benefit from the conversion. Aesthetics of the areas involved in both types of actions will be adversely affected, but will be of a short-term duration.

b. Removal of beaver and dams are recommended to retain the long-term productivity of the Class I trout water in the fishery area. Temporary stream bottom disturbance will occur during explosive removal of dams. Some wildlife habitat will be destroyed with the removal of the beaver impoundments. Some waterfowl and furbearers may be displaced because of this action. Typically beaver impoundments are of short duration

and during a 1 - 4 year period they are abandoned due to food depletion, flooding, or trapping. Their presence on cold-water streams can result in detrimental impacts for a long-term duration such as excessive siltation and destruction of the stream channel characteristics.

c. Construction of cattle watering areas/crossings will reduce livestock damage to the stream. The graveled watering areas may provide increased trout spawning habitat and will replace areas of shifting sand bottoms.

18. Other Special Resources (e.g., archaeological, historical, endangered/ threatened species, scientific areas, natural areas)

The Duncan Creek Fishery Area is in close proximity to three large population centers; Eau Claire, Menomonie, and Chippewa Falls. Since rapid growth for these cities is projected for the future, there will be a higher demand for recreational facilities such as the Duncan Creek Fishery Area. Fishing, hunting and berry picking are current uses of the property which may be considered to be social activities. These activities would be beneficially enhanced by exclusion of livestock grazing and general availability of public lands. Rural residences will not be acquired. Acquisition of farmland is not a goal of the proposed expansion of current ownership. If a small amount of cropland has to be acquired in order to gain control of stream frontage, it will be sold or traded for wild land. Acquisition of lands from willing sellers will benefit the sellers economically. Property taxes will not be significantly affected, since the town is reimbursed by the state for lands withdrawn from the tax base. Current users of the property will probably continue to patronize local businesses. Increases in the public ownership will increase the number of users and their input to area businesses. The fishery area would help stimulate the surrounding local shops, taverns, and restaurants through increased patronage. Construction projects recommended in this plan will also provide temporary employment for an estimated four persons annually on an L.T.E. basis and generate income for suppliers of materials and will prevent some soil erosion of valuable topsoil from fertile farmland.

The plan does not propose any development that would have an adverse impact on the archaeological or historical features as shown. These areas will be protected from physical change. Endangered and threatened species will be protected by public ownership. Any areas of development will be examined for their presence and protected if present. No scientific or natural areas are proposed.

19. Probable Adverse Impacts that Cannot be Avoided

a. Acquisition of private lands may not be acceptable to some. If the property is to be completed, acquisition must occur.

b. Habitat improvement practices will result in short time physical disruptions of streambanks as will access roads leading to the project sites. Aesthetics of the areas to be developed will be altered temporarily.

c. Beaver removal will result in some stream bottom disturbances and loss of certain wildlife habitat.

d. Fencing will result in the clearing of some brush and trees and may alter the aesthetics of the areas involved. Cattle watering areas/crossings will physically change small areas along the streambanks.

e. All access road construction will result in physical and aesthetic alteration of the areas developed.

f. Energy - Gasoline, diesel fuel, and oil will be expended during the development and maintenance of the proposed actions. An estimate of the amounts over the next ten years is not possible at this time. Fence materials, rock, and gravel will be committed for various developments. Quantities cannot be estimated until further acquisition occurs and specific action plans are approved and funded.

ALTERNATIVES (no action - enlarge - reduce - modify - other locations and/or methods)

20. Identify, describe and discuss feasible alternatives to the proposed action and their impacts. Give particular attention to alternatives which might avoid some or all adverse environmental effects.

Do Nothing

If all management practices were suspended, deterioration of fish habitat would occur in future years. The fishery could be expected to diminish if habitat protection is not maintained.

The potential exists for development of homes along certain areas of the stream. Development would detract from the aesthetics of the area for recreation use. Posting to prevent public use will continue to restrict recreational opportunities.

Vegetative cover would eventually reach the climax stage of succession causing existing populations of game and non-game species to decline in favor of other species not as highly sought after. Recreational opportunity for enjoying existing wildlife species would be reduced.

Enlarge Project

Establishment of a property boundary and acreage goal as recommended is desirable to meet the long range goals and objectives of this property. Expansion of the existing acreage will allow instream habitat development to improve the trout population and increase fishing opportunities. Expanded protection of the stream will assure improved water quality for the cold water fisher.

Status Quo

Portions of the stream and associated wildlife lands are now protected but development of instream habitat where it is most needed and feasible cannot be accomplished. Portions of the stream will continue to be restricted for public use. Future potential for housing development and livestock exists and if it occurs it could seriously jeopardize trout habitat, water quality and recreation use.

Reduce Project

Attainment of the goals and objectives would be impossible if the area was reduced. Future recreation demands could not be met.

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

21. Secondary Effects: 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 here and reference their discussion in items 15-18 as appropriate.

    If the actions proposed are implemented, significant improvement of fish resources will occur. Livestock will be excluded from the stream frontage resulting in improved water quality. Stream improvement will create more instream cover and spawning areas for trout and bank erosion will be reduced. Acquisition will expand the area to be protected and developed allowing for protection of a significant portion of the watershed.

22. New Environmental Effect: Does the action alter the environment so a new physical, biological or socio-economic would exist? If so, list here and reference their discussion in items 5-10 or 15-18 as appropriate.

    The environmental effect will be to reduce erosion and create permanent habitats for fish, particularly trout. Physical effects will be of a short term nature. Socio-economic changes are not expected to show significant changes or increases although some change is anticipated.

23. Geographically Scarce: Are the existing environmental features that would be affected by the proposed action scarce, either locally or statewide? If so, list here and reference their discussion in items 15-18 as appropriate.

    Chippewa and Dunn County have several miles of high quality trout water. Water of this nature is produced only in a given quantity, so a great deal of protection must be afforded to these areas.

24. Precedent: Does the action and its effect(s) require a decision which would influence future decisions? Describe.

    The master plan presents proposals for the long range management of the Duncan Creek Fishery Area. Its approval, denial, or modification will all result in influencing the actions taken to meet the proposed goals and objectives for this property's management. Master plans are a relatively new concept in the management of fishery properties. Decisions

made on this plan could influence those made for proposed plans for other properties. The actions proposed within the plan are not precedent setting in themselves and constitute accepted resource management techniques in Wisconsin.

25. Controversy: Discuss and describe concerns which indicate a serious controversy or unresolved conflicts concerning alternative uses of available resources.

None of the proposed actions have been seriously controversial in the past for this property. Agency and public review may reveal controversies not evident at this time.

Increased state purchase of land or land rights along the stream may be somewhat controversial, although the DNR has been actively purchasing lands in this area for 27 years.

26. Consistenty with Plans: Does the action conflict with local or agency zoning or with official agency plans or policy of local, state or federal goverment (e.g., NR 1.95)? If so, how? Refer to applicable comments in item 31.

No other long range plans are known at this time.

27. Cumulative Impacts: While the action by itself may be limited in scope, would repeated actions of this type result in major or significant impacts to the environment?

Master plans for all state lands, if implemented, would result in significant long term beneficial impacts to the environment. Cumulative impacts would result in long term developments on many properties which are currently lacking.

Management actions recommended in this plan may significantly reduce erosion and increase stable fish habitats resulting in greater fish productivity.

28. Foreclose Future Options: Is the action irreversible? Will it commit a resource (e.g., energy, habitat, historical features) for the foreseeable future?

None of the actions proposed in this plan are irreversible. All proposed developments could be removed and public land sold. These options are neither recommended or feasible at this time. The actions proposed in the plan will commit the resources within the property boundary for the goals and objectives for which it was acquired.

29. Socio-cultural Impacts: Will action result in direct or indirect impacts on ethnic or cultural groups or alter social patterns?

☐ No

☐ Yes

30. Other:

None

LIST OF AGENCIES, GROUPS AND INDIVIDUALS CONTACTED REGARDING THE PROJECT (Include DNR personnel and Title)

31.

Date	Contact	Comment Summary
2-15-83	Harlan Nelson, Soil Conservationist	Comments included in plan
2-11-83	Cliff German, Scientific Areas Coordinator	Comments included in plan
2-28-83	Brian Marinello, DNR Forester	Comments included in plan
2-12-83	Rolland Nesbit, DNR Wildlife Manager	Comments included in plan
2-23-83	Tim Miller, DNR Parks	Comments included in plan
2-18-83	Kim Mark Peters, Reg. & Compliance Specialist	Comments included in plan

Duncan Cr. MP

County: Chippewa

MAY 29 1985

EVALUATION

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 prior to final action by the Department on this project.

Refer to Office of the Secretary..... ☐

Major and Significant Action: Prepare EIS..... ☐

Request EIR..... ☐

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

SIGNATURE OF EVALUATOR	DATE
Doug Erickson RL	
NOTED: AREA SUPERVISOR OR BUREAU DIRECTOR	DATE
J. Jackson RL	8/17/83

Number of responses to public notice 0

Public response log attached?..... No

CERTIFIED TO BE IN COMPLIANCE WITH WEPA

DISTRICT DIRECTOR OR DIRECTOR OF BEI (OR DESIGNEE)	DATE
Roger M. Fritz	5-23-85

This decision is not final until certified by the appropriate District Director or the Director of BEI. 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 an 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.