

pn I  
Region WCR County Chippewa Date 9.20.95 Classification LFF

Water Body: Chippewa River, unnamed tributary

Discharger: Northern WI Center

If classified as Limited Forage Fish (LFF) or Limited Aquatic Life (LAL), check any of the following Use Attainability Analysis factors that apply:

Naturally occurring pollutant concentrations prevent the attainment of use

Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met

Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place

? Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or operate such modification in a way that would result in the attainment of the use

? Small concrete dam...  
Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses

low flow...  
Controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact

#### Supporting Evidence included

- Biological Data (fish/invert)
- Chemical Data (temp, D.O., etc.)
- Physical Data (flow, depth, etc.)
- Habitat Description
- Site Description/Map
- Other:

#### Comments:

I'm not really sure what factors are limiting this stream... → Low Flow

- Considerable data available -- check w/ region on justification of class'n.

9/20/95 - Paul LaLiberte

DETERMINATION OF AQUATIC USE DESIGNATION AND WATER QUALITY STANDARDS  
FOR AN UNNAMED STREAM TRIBUTARY TO THE CHIPPEWA RIVER IN CHIPPEWA  
COUNTY - RECEIVING WATER FOR DISCHARGE FROM NORTHERN WISCONSIN CENTER

September 20, 1995

PAUL LA LIBERTE

The unnamed stream receiving treated wastewater from the Northern Wisconsin Center was evaluated for the purposes of assigning an appropriate aquatic use designation pursuant to NR104 and NR103 Wisconsin Administrative Code. The effluent from this facility is cooling water with a discharge rate of about 7000 gpd. It has a specific WPDES, rather than a general permit due to the presence of additives in the effluent. The facility has operated under a WPDES permit for 20 years. No changes are proposed for the permit currently being considered.

Although the USGS map indicates the stream does not have continuous flow, flow was observed both into and out of the Center property. Portions of the waterway within the property did not have observable flow. The prevailing conditions during the evaluation were deemed to be reflective of normal, summer hydrology.

The waterway consists of a series of wet meadows and shallow marshes connected by small stream channels. At least one of the shallow marshes is formed by a low head concrete dam. Existing culverts at road crossings also play a role in determining hydrology of the waterway. It's possible that some of the open water areas may have been excavated.

The functional values of the 20 acre wetland waterway on the Center property was evaluated using the Wisconsin DNR Rapid Assessment Methodology. It was found to have a high value for flood storage and water quality protection, medium value for habitat, floral diversity and aesthetics/recreation and low value for groundwater protection.

Aquatic use was assessed by backpack electrofishing near the inlet and outlet of the waterway to the property. At the inlet (map site 1), the main fish present were brook sticklebacks and mudminnows, both tolerant to low water quality. A single one inch bluegill was found. This is consistent with the very low flow observed entering the property (less than 1 cfs), the stagnant conditions and anticipated high sediment oxygen demand at the site. At this point the waterway consisted of a channel about 3 feet wide with a very soft, organic bottom. Elodea was abundant, covering nearly the entire channel. A short distance below the outfall, the waterway widened into a shallow marsh.

At the outlet (map site 5), the waterway was a more confined channel with a primarily sand bottom. A stream habitat rating performed at this site yielded a "good" ranking. The fish community was much more diverse ( 9 species) and included abundant intolerant species. A macroinvertebrate sample was taken and preserved at map site 5 for reference purposes.

## RECOMMENDED AQUATIC USE DESIGNATION

Based on the uses being supported at the time of the evaluation, the recommended aquatic classification for the waterway is Limited Forage Fish at the inlet to the Center property and a warmwater forage fishery at the outlet of the property. The point at which the use changes is somewhere between map sites 3 and 5. Exact determination of the downstream extent of the Limited Forage Fish classification would be difficult and likely to vary from year to year. Since the regulatory action being taken on the Center's WPDES permit does not require this determination, it was not attempted.

## RECOMMENDED CRITERIA AND LIMITS

The effluent limits for the Center WPDES permit should be based on a classification and criteria associated with Limited Forage Fish. Since the upper reach of the waterway does not have a flowing surface water connection to the lower reaches under base flow conditions, no extension of impacts to downstream reaches is anticipated.

cc

J. Ball - WR/2

P. Troughell - WR/2

M. Van Fossen

S. Thon

CHIPPEWA RIVER

Map of waterway with  
evaluation sites



CONTOUR INTERVAL IS 5 FEET. DASHED CONTOUR LINES  
REPRESENT 2 FOOT SUPPLEMENTARY CONTOURS.  
PHOTOGRAPHED BY PHOTOGRAMMETRIC METHODS FROM  
AERIAL PHOTOGRAPHS TAKEN IN 1962.

CG 80 2

Northern Wisconsin Center  
outfall location  
unnamed  
tributary to  
Chippewa River



GROVE

GRANT AVE.

4th ST.

STORM WATER FLOW

outfall 001

Direct Discharge

Flow

Flow

63 Power Plant

settling Basin

79 MAINT

64

7

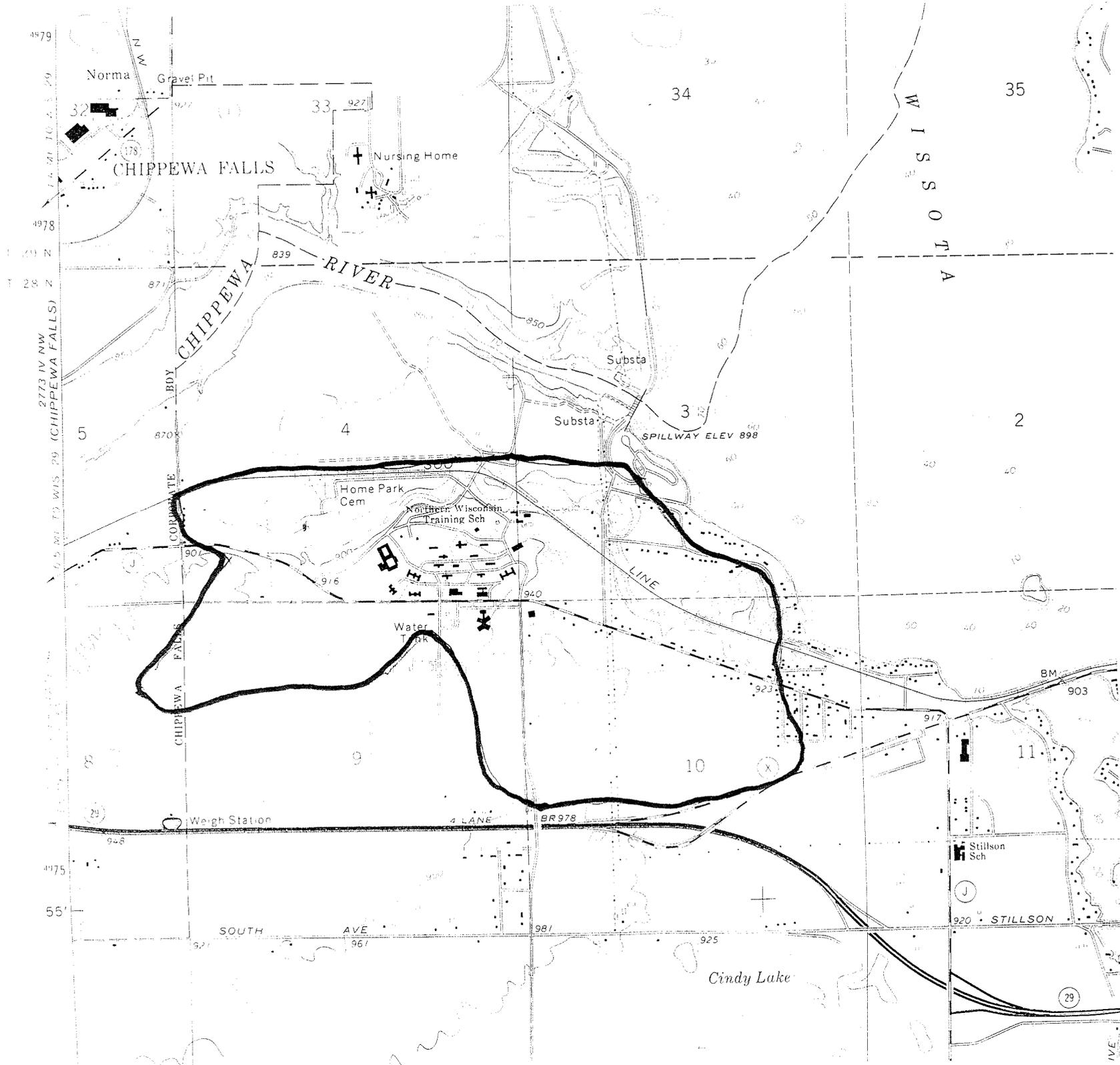
1A

LAUNDRY COMMISSARY

1

9

38



Map of Water shed

Sample ID # 4 50822-09-01 Waterbody Name Northern Wisconsin Center Trib.  
 Y Y M M D D Cnty Field #

Water Temp (Celsius) \_\_\_\_\_ Dissolved Oxygen (mg/l) \_\_\_\_\_

Sample Location: SE SW 4 28N 8W Master Waterbody # \_\_\_\_\_  
 1/16 1/4 Sec. Tn. Rng.

Project Name Northern Center Storet Station # \_\_\_\_\_

Ave. Stream Width (Ft.) at Site 7' Ave. Stream Depth (Ft.) at Site 3'

Collector LaLiberte P. Field # Rep Rep 2 Rep 3  
 (Last Name, First Initial) Measured Velocity (fps)

Sorter \_\_\_\_\_ Est. Velocity (fps) V. Slow (<-0.2)  
 Est. % of Sample Sorted \_\_\_\_\_ Slow (0.2-0.5)  
 Taxonomist \_\_\_\_\_ Moderate (0.5-1.5)  
 Fast (1.5-.>)

Location Description downstream of concrete bridge where stream leaves N. Center property Map site 5 Sampled Habitat: 1. Riffle 2. Run  
 3. Pool 4. Lake

Sampling Device: 1. D Frame, 2. Artificial Substrate, 3. Surber, 4. Other \_\_\_\_\_ Est. Time Spent Sampling (Min.) 3.25

Substrate at Site Location (%)  
 \_\_\_\_\_ Bedrock 30 Rubble (2.5-10.0" dia.) \_\_\_\_\_ Sand \_\_\_\_\_ Clay \_\_\_\_\_ Muck \_\_\_\_\_  
 \_\_\_\_\_ Boulders (10.0" dia.) 70 Gravel (0.1-2.5" dia.) \_\_\_\_\_ Silt \_\_\_\_\_ Detritus \_\_\_\_\_ Debris/Veg. \_\_\_\_\_

Substrate Sampled (%) (Same as above X)  
 \_\_\_\_\_ Bedrock \_\_\_\_\_ Rubble (2.5-10.0" dia.) \_\_\_\_\_ Sand \_\_\_\_\_ Clay \_\_\_\_\_ Muck \_\_\_\_\_  
 \_\_\_\_\_ Boulders (10.0" dia.) \_\_\_\_\_ Gravel (0.1-2.5" dia.) \_\_\_\_\_ Silt \_\_\_\_\_ Detritus \_\_\_\_\_ Debris/Veg. \_\_\_\_\_

Aquatic Vegetation 0 % of Total Stream Channel at Sample Site

Observed Instream Water Quality Indicators (Perceived WQ: Excellent, Good, Fair, Poor)

	Not Present	Insignificant	Significant	Comments
Turbidity	1	2	3	
Chlorine or Toxic Scour	1	2	3	
Macrophytes	1	2	3	
Filamentous Algae	1	2	3	
Planktonic Algae	1	2	3	
Slimes	1	2	3	
Iron Bacteria	1	2	3	

Factors Which May Be Affecting Habitat Quality

	Not Present	Insignificant	Significant	Comments
Sludge Deposits	1	2	3	
Silt and Sediment	1	2	3	
Channel Ditching	1	2	3	
Down/Up Stream Impoundment	1	2	3	wetland ponds
Low Flows	1	2	3	
Wetlands	1	2	3	

Pollutant Sources

	Not Present	Insignificant	Significant	Comments
Livestock Pasturing	1	2	3	
Barnyard Runoff	1	2	3	
Cropland Runoff	1	2	3	
Tile Drains	1	2	3	
Septic Systems	1	2	3	
Streambank Erosion	1	2	3	
Urban Runoff	1	2	3	
Construction Runoff	1	2	3	
Point Source (Specify Type)	1	2	3	N. Center Center Water
Other (Specify)	1	2	3	

Stream N. Wis. Center Reach Location Downstream Site (#5) Reach Score/Rating 160  
 County CHIP Date 8-22-95 Evaluator L. Liberte Classification Good

Rating Item	Category			
	Excellent	Good	Fair	Poor
Watershed Erosion	No evidence of significant erosion. Stable forest or grass land. Little potential for future erosion. <u>8</u>	Some erosion evident. No significant "raw" areas. Good land mgmt. practices in area. Low potential for significant erosion. 10	Moderate erosion evident. Erosion from heavy storm events obvious. Some "raw" areas. Potential for significant erosion. 14	Heavy erosion evident. Probable erosion from any run off. 16
Watershed Nonpoint Source	No evidence of significant source. Little potential for future problem. <u>8</u>	Some potential sources (roads, urban area, farm fields). 10	Moderate sources (small wetlands, tile fields, urban area, intense agriculture). 14	Obvious sources (major wetland drainage, high use urban or industrial area, feed lots, impoundment). 16
Bank Erosion, Failure	No evidence of significant erosion or bank failure. Little potential for future problem. <u>4</u>	Infrequent, small areas, mostly healed over. Some potential in extreme floods. 8	Moderate frequency and size. Some "raw" spots. Erosion potential during high flow. 16	Many eroded areas. "Raw" areas frequent along straight sections and bends. 20
Bank Vegetative Protection	90% plant density. Diverse trees, shrubs, grass. Plants healthy with apparently good root system. <u>6</u>	70-90% density. Fewer plant species. A few barren or thin areas. Vegetation appears generally healthy. 9	50-70% density. Dominated by grass, sparse trees and shrubs. Plant types and conditions suggest poorer soil binding. 15	<50% density. Many raw areas. Thin grass, few if any trees and shrubs. 18
Lower Bank Channel Capacity	Ample for present peak flow plus some increase. Peak flow contained. W/D ratio <7. 8	Adequate Overbank flows rare. W/D ratio 8-15. <u>10</u>	Barely contains present peaks. Occasional overbank flow. W/D ratio 15-25. 14	Inadequate, overbank flow common. W/D ratio >25. 16
Lower Bank Deposition	Little or no enlargement of channel or point bars. 6	Some new increase in bar formation, mostly from coarse gravel. <u>9</u>	Moderate deposition of new gravel and coarse sand on old and some new bars. 15	Heavy deposits of fine material, increased bar development. 18
Bottom Scouring and Deposition	Less than 5% of the bottom affected by scouring and deposition. 4	5-30% affected. Scour at constrictions and where grades steepen. Some deposition in pools. 8	30-50% affected. Deposits and scour at obstructions, constrictions and bends. Some filling of pools. 16	More than 50% of the bottom changing nearly year long. Pools almost absent due to deposition. 20
Bottom Substrate/ Available Cover	Greater than 50% rubble, gravel or other stable habitat. 2	30-50% rubble, gravel or other stable habitat. Adequate habitat. <u>7</u>	10-30% rubble, gravel or other stable habitat. Habitat availability less than desirable. 17	Less than 10% rubble gravel or other stable habitat. Lack of habitat is obvious. 22
Avg. Depth Riffles and Runs	Cold >1' 0 Warm >1.5' 0	6" to 1' 6 10" to 1.5' 6	3" to 6" 18 6" to 10" 18	<3" 24 <6" <u>24</u>
Avg. Depth of Pools	Cold >4' 0 Warm >5' 0	3' to 4' 6 4' to 5' 6	2' to 3' 18 3' to 4' 18	<2' 24 <3' <u>24</u>
Flow, at Rep. Low Flow	Cold >2 cfs 0 Warm >5 cfs 0	1-2 cfs 6 2-5 cfs 6	.5-1 cfs 18 1-2 cfs <u>18</u>	<.5 cfs 24 <1 cfs 24
Pool/Riffle, Run/Bend Ratio (distance between riffles ÷ stream width)	5-7. Variety of habitat. Deep riffles and pools. 4	7-15. Adequate depth in pools and riffles. Bends provide habitat. 8	15-25. Occasional riffle or bend. Bottom contours provide some habitat. <u>16</u>	>25. Essentially a straight stream. Generally all flat water or shallow riffle. Poor habitat. 20
Aesthetics	Wilderness characteristics, outstanding natural beauty. Usually wooded or un-pastured corridor. 8	High natural beauty. Trees, historic site. Some development may be visible. 10	Common setting, not offensive. Developed but uncluttered area. <u>14</u>	Stream does not enhance aesthetics. Condition of stream is offensive. 16
Column Totals:	<u>26</u>	<u>38</u>	<u>48</u>	<u>48</u>

Column Scores E \_\_\_\_\_ +G \_\_\_\_\_ +F \_\_\_\_\_ +P \_\_\_\_\_ = 160 = Score

<70 = Excellent, 71-129 = Good, 130-200 = Fair, >200 = Poor

Fish listed on back

map site 5

Downstream Site

shaded w pool stretch below old dam / concrete bridge

CHEEK CHUB - up to 8"	abundant	T W1
WH. SUCKER	common	T W1
PUMPKINSEED (1) 3"	1	W2
COMMON SHiner	abundant	T W1
Long Nose Dace	abundant	IT W1
MUD MINNOW	present	VT W1
STICKLEBACK	present	T W1
N. RED BELLY DACE	1	IT W1
Black nose Dace	1	IT W1

Upstream Site

map site 1

Stickle back	common	shaded pool upstream from cooling water outfall
Mud minnow	common	W1
Bluegill (1) 1"		W2

Wisconsin Department of Natural Resources

RAPID ASSESSMENT METHODOLOGY FOR EVALUATING  
WETLAND FUNCTIONAL VALUES

GENERAL INFORMATION

Name of Wetland/Owner:	Northern Wisconsin Center
Location:	1/4, SPA, Section 4, Township 28, Range 8W
Evaluator(s)	LaLiberte
Date(s)	8-22-95

Description of seasonality limitations of this inspection due to time of year of the evaluation and/or current hydrologic and climatologic conditions (e.g. after heavy rains, snow or ice cover, during drought year, during spring flood, during bird migration):

None

SUMMARY OF FUNCTIONAL VALUES

Based on the results of the attached functional assessment, rate the significance of each of the functional values for the subject wetland and check the appropriate box.

Function	Significance				
	Low	Medium	High	Exceptional	N/A
Flood Storage			X		
Water Quality			X		
Groundwater	X				
Shoreline Protection					X
Habitat		X			
Floral Diversity		X			
Aesthetics/Recreation		X			

List any Special Features/ Red Flags:

SITE DESCRIPTION

I. GENERAL DESCRIPTION

- A. Wisconsin Wetlands Inventory delineation: E2H, T3K, E1K
- B. Wetland Type (shallow marsh, sedge meadow, etc.): Fresh wet meadow / shallow marsh
- C. Estimated size of wetland in acres: 20 Ac
- D. Estimated size of wetland watershed in acres: 1.5 mi<sup>2</sup>

II. HYDROLOGIC CONDITIONS

A. Hydrologic Setting (primary water source). Check all that apply:

Surface Water Depression  
(input=overland flow and precipitation)

Surface Water Slope/Riverine or Lacustrine event condition  
(input=overland flow and flood)

Groundwater Depression  
(input=groundwater discharge)

Groundwater Slope/Flow Through base flow conditions  
(input=groundwater flow through)

B.  N Does the wetland have standing water, and if so what is the average depth? .5' Approximately how much of the wetland is inundated? 10%

C.  N Is there any field evidence of wetland hydrology such as buttressed tree trunks, adventitious roots, drift lines, water marks, water stained leaves, soil mottling/gleying, organic soils, histc epipedon (circle those that apply)? very wet site

D.  N Has the wetland hydrology been altered by ditching, tiles, dams, culverts, well pumping, diversion of surface flow, or changes to runoff within the watershed (circle those that apply)?

E.  N Does the wetland have an inlet, outlet, or both (circle those that apply)?

F. How is the hydroperiod (seasonal water level pattern) of the wetland classified?

1. Flooded

- permanently
- intermittently exposed (only dry in drought years)
- semi-permanently (through growing season)
- seasonally (water absent at end of growing season)
- temporarily (brief periods during growing season)
- intermittently (no seasonal pattern to flooding)

2. Saturated (surface water seldom present)

3. Artificial Conditions

- artificially flooded
- artificially drained

G.  Y  N Is the wetland a navigable body of water? List any surface waters associated with the wetland or in proximity to the wetland (note approximate distance from the wetland and navigability determination). Note if there is a surface water connection to other wetlands.

not officially determined but standing water would float a canoe - some areas may have been excavated

III. VEGETATION

A. Describe the vegetation communities present and the dominant species.

- floating leaved community dominated by: Lemna
- submerged aquatic community dominated by: Fila glase F. lutea
- emergent community dominated by: reed canary grass
- shrub community dominated by: alder
- deciduous broad-leaved tree community dominated by: Box Elder
- Tamarack dominated
- needle-leaved evergreen tree community dominated by: \_\_\_\_\_
- sphagnum mat
- other (explain) \_\_\_\_\_

B. Other plant species identified during site visit:

IV. SOILS

*not examined*

A. SCS Soil Map Classification: \_\_\_\_\_

B. Field description:

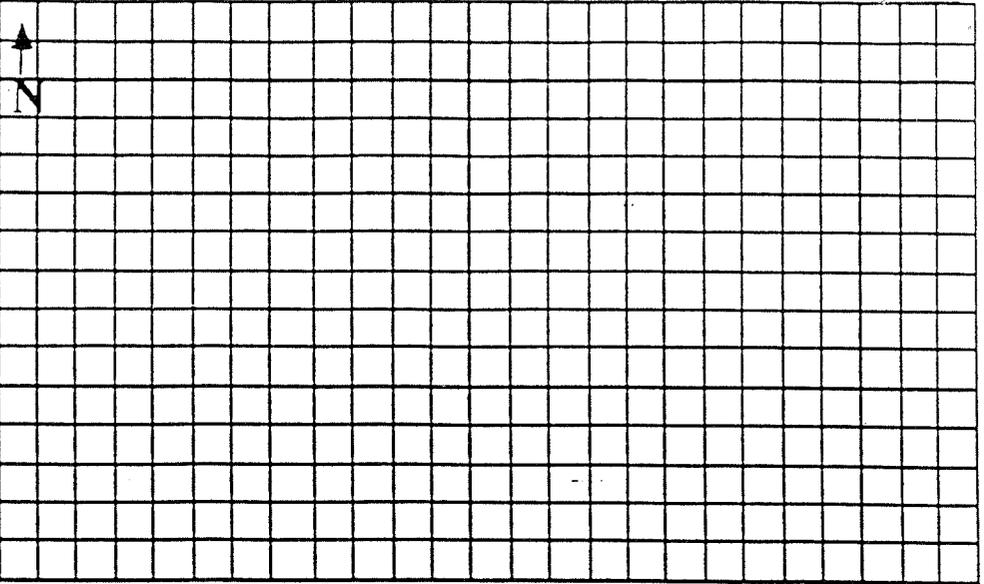
- Organic (histosol)? If so, is it a muck or a peat?
- Mineral soil? If so, is mottling or gleying present?  
 Soil Description: \_\_\_\_\_  
 Depth of mottling/gleying: \_\_\_\_\_  
 Munsell color (matrix/mottles): \_\_\_\_\_

V. SURROUNDING LAND USES

<u>Land-Use</u>	<u>Estimated % of wetland watershed</u>
Industrial.....	
Commercial.....	
Residential.....	25
Agricultural/cropland.....	
Agricultural/grazing.....	
Forested.....	50
Grassed recreation areas/parks.....	
Old Field.....	25
Highways/roads.....	
Other.....	

DRAWINGS OF PROPOSED  
ACTIVITY SHOULD BE PREPARED  
IN ACCORDANCE WITH SAMPLE  
DRAWING SHEET.

Location Sketch (indicate scale). Show route to project site; include nearest mainroad and crossroad.



Proposed Materials:

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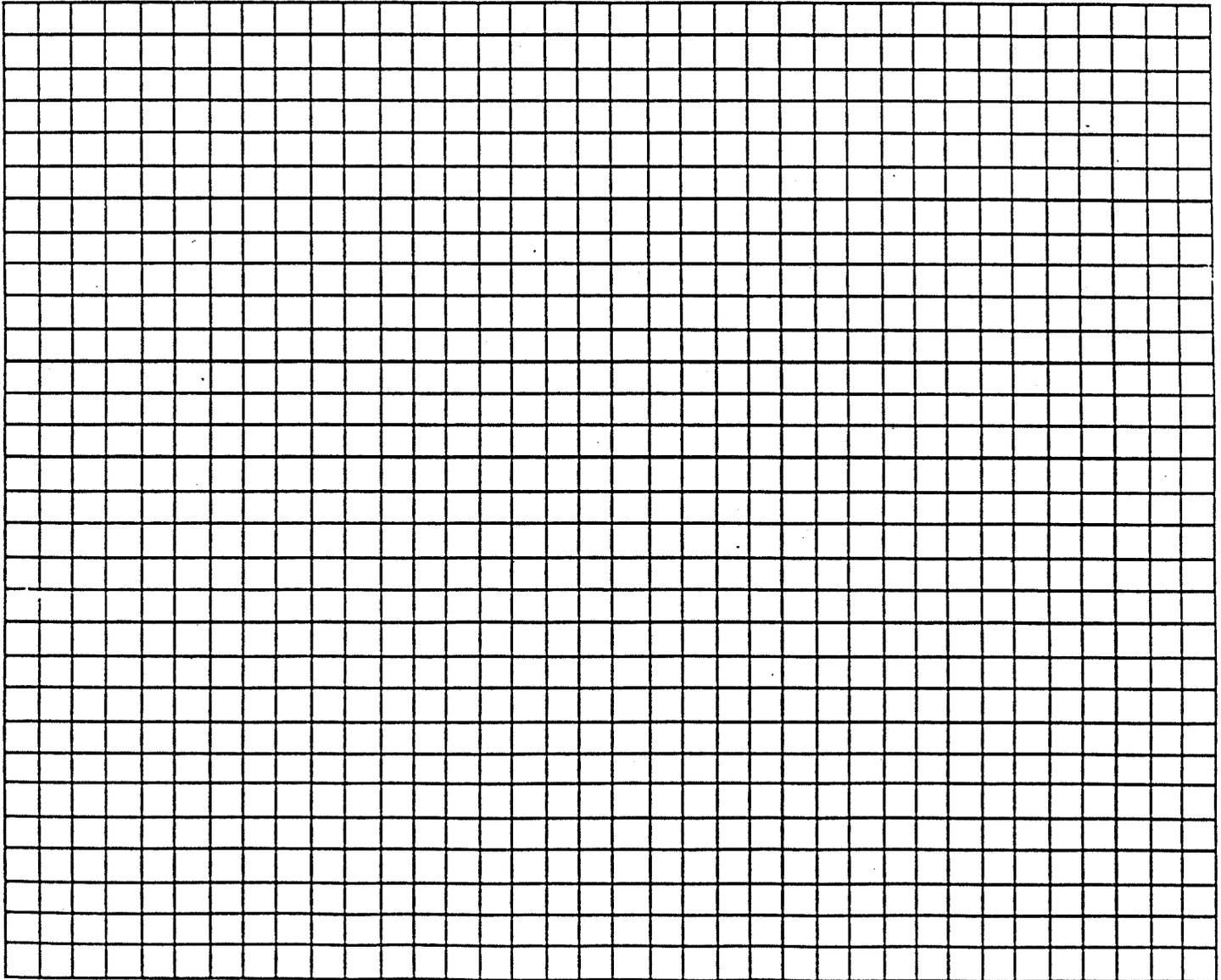
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Project Plans (Include top view and typical cross sections. Clearly identify features and dimensions or indicate scale.)  
(Use additional sheets if necessary)



## FUNCTIONAL ASSESSMENT

The following assessment requires the evaluator to examine site conditions that provide evidence that a given functional value is present and to assess the significance of the wetland to perform those functions. Positive answers to questions indicate the presence of factors important for the function. The questions are not definitive and are only provided to guide the evaluation. After completing each section, the evaluator should consider the factors observed and use best professional judgement to rate the significance. The ratings should be recorded on page 1 of the assessment.

### Special Features/ RED FLAGS

1. Is the wetland in or adjacent to an area of special natural resource interest (NR 103.04, Wis. Adm. Code):

- None*
- a. Cold water community as defined in NR 102.04(3)(b) (including trout streams or trout lakes)?
  - b. Lakes Michigan and Superior and the Mississippi River?
  - c. State or federal designated wild and scenic river?
  - d. Designated State riverway?
  - e. Designated State scenic urban waterway?
  - f. Environmentally sensitive area or environmental corridor identified in an area-wide water quality management plan, special area management plan, Special wetland inventory study, or an advanced delineation and identification study?
  - g. Calcareous fen?
  - h. State park, forest, trail or recreation area?
  - i. State or federal designated wilderness area?
  - j. Designated or dedicated state natural area?
  - k. Wild rice water listed in NR 19.09?
  - l. Surface water identified as an outstanding or exceptional resource water in NR 102.

2. *77* **Y N** According to the Natural Heritage Inventory (Bureau of Endangered Resources) or direct observations, are there any rare, endangered, or threatened plant or animal species in, near, or using the wetland? If so, what species?

### Flood storage/attenuation

1. **Y N** Is the wetland a surface water slope/riverine or lacustrine or surface water depression type wetland? If NO, STOP and enter LOW for this function. If YES, then continue.

2. **Y N** Are there steep slopes, large impervious areas, moderate slopes with row cropping, or areas with severe overgrazing within the watershed (circle those that apply)?

3. **Y N** Does the wetland significantly reduce run-off velocity due to its size, configuration, or vegetation type and density?

4. **Y N** Does the wetland show evidence of flashy water level responses to storm events (debris marks, erosion lines, stormwater inputs, channelized inflow)?

5. **Y N** Is there a natural feature or human-made structure impeding drainage from the wetland that causes backwater conditions?

6.  Y  N Considering the location of the wetland in relation to the associated surface water watershed, is the wetland important for attenuating floods or storing flood peaks (i.e. is the wetland located in the mid or lower reaches of the watershed)?

7.  Y  N Considering the size of the wetland area in relation to the size of its watershed, at any time during the year is water likely to reach the wetland's storage capacity (i.e. the level of easily observable wetland vegetation)? [For some cases where greater documentation is required, one should determine if the wetland has capacity to hold 25 % of the run-off from a 2 year-24 hour storm event.]

### Water quality protection

1.  Y  N Does the wetland receive overland flow as the primary source of water (i.e Surface Water Slope or Surface Water Depression type wetland)?

*events only*

2.  Y  N Do the surrounding land uses have the potential to deliver significant nutrient and/or sediment loads to the wetland?

3.  Y  N Is the position of the wetland in the landscape such that run-off is held or filtered before entering a surface water?

4.  Y  N Based on your answers to the previous section, does the wetland perform significant flood attenuation (residence time to allow settling)?

5.  Y  N Does the wetland have significant vegetative density to decrease water energy and allow settling of suspended materials?

6.  Y  N Are algal blooms, heavy macrophyte growth, or other signs of excess nutrient loading to the wetland apparent (or historically reported)?

7.  Y  N Is the wetland constantly saturated thus providing a condition that promotes trapping of nutrients in peat (i.e. limited flushing of the wetland)?

### Groundwater recharge and discharge

1.  Y  N Is the wetland a Groundwater Slope/Flow Through or Groundwater Depression type wetland? If NO, STOP and enter LOW for this function. If YES, then continue.

2.  Y  N Related to discharge, are there observable (or reported) springs located in the wetland, physical indicators of springs such as marl soil, or vegetation indicators such as watercress or marsh marigold present that tend to indicate the presence of groundwater springs? (NOTE: If area is a calcareous fen, see RED FLAGS section).

3.  Y  N Related to discharge, is the wetland important for maintaining base flow in a stream?

4.  Y  N Related to recharge, is the wetland located on or near a groundwater divide (e.g. a topographic high)?

### Shoreline Protection

1. Y  N Does the wetland front on open water? If NO, STOP and enter "not applicable" for this function. If YES, then continue.
2. Y  N Is the bank or shoreline exposed to constant wave action caused by boats?
3. Y  N Is the bank or shoreline exposed to wave action due to a long wind fetch?
4. Y  N Is the shoreline vegetated with perennial wetland species that form dense root mats and/or species that have strong stems that are resistant to erosive forces?

### Floral Diversity

1. Y  N Does the wetland support a variety of native plant species (i.e. not a monotypic stand of cattail or giant reed grass and/or not dominated by exotic species such as reed canary grass, brome grass, buckthorn, purple loosestrife, etc.)?
2. Y  N Is the wetland plant community regionally scarce or rare?

### Fish and Wildlife Habitat

1. List any animal species observed or evidenced:

*Frogs, ducks, song birds*

2. Y  N Does the wetland contain a number of diverse vegetative cover types and a high degree of interspersed of those vegetation types?
3. Y  N Is the estimated ratio of open water to cover between 30 and 70%?
4. Y  N Does the surrounding upland habitat support a variety of animal species?  
*a lot of it developed*
5. Y  N Is the wetland part of or associated with a wildlife corridor ~~or designated environmental corridor?~~
6. Y  N Is the surrounding habitat and/or the wetland itself a large tract of undeveloped land important for wildlife in the area?
7. Y  N Are there other wetland areas near the subject wetland that are important to wildlife?
8. Y  N Is the wetland contiguous with a permanent waterbody or periodically inundated for sufficient periods of time to provide spawning/nursery habitat for fish?
9. Y  N Does the wetland provide significant food base for fish and wildlife (e.g. insects, crustaceans, voles, shrews, wild rice, wild celery, duckweed, pondweeds, watermeal, bulrushes, bur reeds, arrowhead, smartweeds, millets...)?  
*small numbers*
10. Y  N Is the wetland providing habitat that is scarce to the region?

Aesthetics/Recreation/Education and Science

- 1.  Y  N Is pollution (i.e. litter, oil residue, hyper-eutrophication, odors) not obvious within the wetland?
- 2.  Y  N Is the wetland located within a predominantly urbanized area?
- 3.  Y  N Is the wetland accessible and/or frequently seen by the public? *center residents*
- 4.  Y  N Is more than half of the wetland not observable from any easily accessible vantage point?
- 5.  Y  N Is the wetland diverse in plant communities or interspersed with open water?
- 6.  Y  N Is the wetland, or could it be, used for recreation, and if so, which activities? Is there any documented recreational uses?

- nature observation
  - hiking
  - biking
  - skiing
  - photography
  - fishing
  - hunting
  - boating/canoeing
  - wild ricing
  - other
- } possible*

7.  Y  N Is the wetland being used for education or scientific study purposes?

*can be used by residents but of limited access to general public*