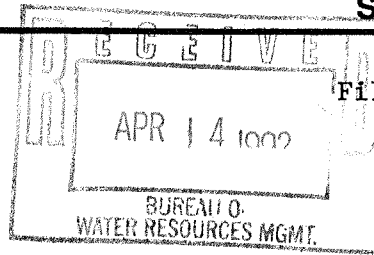


CORRESPONDENCE/MEMORANDUM

State of Wisconsin

Date: March 31, 1992
To: Dave Brodzinski/Horicon
From: Mark Sesing/Horicon *ms*
Subject: Preliminary Stream Classification for a tributary to Horicon Marsh
(John Deere trib)



File Ref: 3200

An initial site investigation at the tributary site located on the attached map was conducted on 3/30/92. Due to the nature of the resource, obvious conditions allowed for a preliminary determination regarding biological uses to be made without the usual fanfare. Based on these observations, the stream has been classified as a LIMITED WARMWATER FORAGE FISHERY, LFF(e), otherwise known as an intermediate surface water.

This conclusion was based on the following information:

Habitat: the segment monitored has been ditched, some of it recently. Steep eroding banks, siltation, excessive algal growth (yes, even in March!), and the apparent intermittent flow will restrict the biological potential of the trib to support all but the most tolerant aquatic life. Instream cover was lacking with the exception of the mats of algae which would provide some cover to forage fish and possibly a food source for waterfowl. Depths range from a few inches to possibly 3 feet near the lower end of the trib. Width ranges from a few feet to > 15 ft in lower segments.

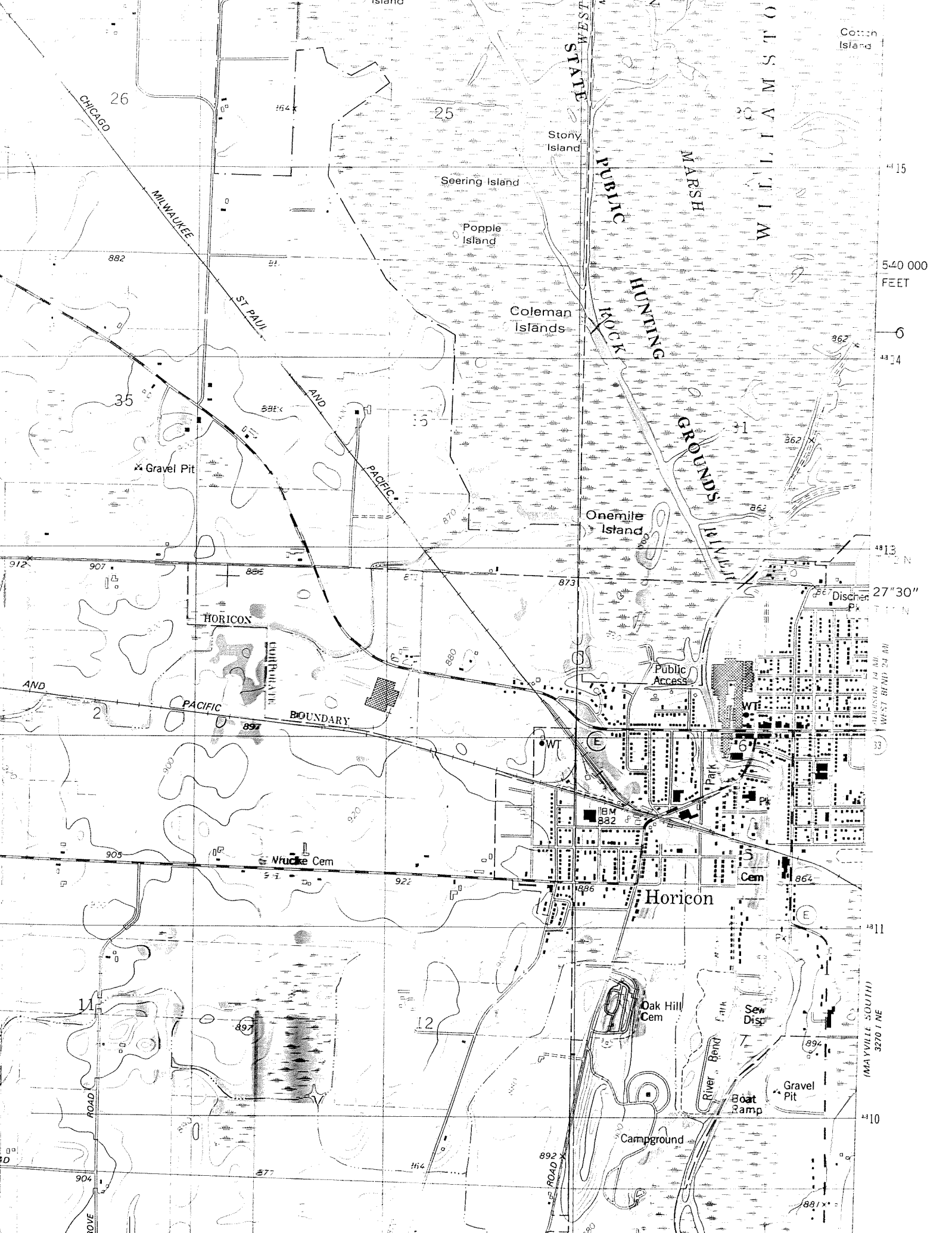
Watershed: The area draining to the trib is primarily agricultural with a growing industrial land use. Sources of sediment and nutrients appear to be significant. As the industrial base grows, it is likely that flows will be more variable due to impervious surface effects. The trib is ditched for its entire length and flows are already culturally affected. The industrial areas riparian to the stream appear to also be delivering significant amounts of sediment and possibly nutrients. Eroded channels and steambank "slumping" were noted adjacent to a large parking area near the lower end of the stream.

Hydrology: USGS topographic maps indicate that the trib is intermittent. This is no reason to doubt that determination. However, lower segments of the trib before it enter Horicon marsh are influenced by backwater and these areas appear to possibly be capable of supporting aquatic life during the summer period.

Existing Biological Uses; On March 30, 1992, hundreds and perhaps thousands of forage fish were present in the segment between the marsh and CTH E. Species was not determined; however, based on monitoring under similar circumstances of watershed conditions and apparent habitat restrictions the species are likely to be tolerant.

Some waterfowl use would be expected in the lower reach as well especially in consideration of the proximity of the Horicon Marsh.

MS



Cotton Island

Stony Island

Seering Island

Popple Island

Coleman Islands

HORIZON
WISCONSIN
ROCK HUNTING
MARSH
GROUNDS

Onemile Island

HORIZON

Public Access

WT

Horicon

Oak Hill Cem

Sew Dis

Boat Ramp

Campground

Gravel Pit

Nrucke Cem

Gravel Pit

Gravel Pit

15

540 000
FEET

6

14

13

27"30"

WEST BHD 24 BH

11

(MAYVILLE SOUTH)
3270 TINE

10

Sect 1 T11N-R15E

Stream John Deere Trib Reach Location Downstream CTH E Reach Score/Rating _____
 County Dodge Date 3-30-92 Evaluator MARK SESING Classification LFF(e)

Rating Item	Category			
	Excellent	Good	Fair	Poor
Watershed Erosion	No evidence of significant erosion. Stable forest or grass land. Little potential for future erosion. 8	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. 8	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. 4	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. 6	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. 10	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. 9	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. 7	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" 24
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' 24
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 18	<.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. 16	>25. Essentially a straight stream. Generally all flat water or shallow riffle. Poor habitat. 18 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. 14	Stream does not enhance aesthetics. Condition of stream is offensive. 16

Column Totals:

74 140

Column Scores E _____ + G _____ + F 74 + P 140 = 214 = Score

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