Reviewed by UBub Date 2/2004

Region WCR **County** LaCrosse **Report Date** 10/1995 **Classification** LFF/WWSF

Water Body: LaCrosse River, Wetland Trib

Discharger: Rockland WWTP

If stream is classified as Limited Forage Fish (LFF) or Limited Aquatic Life (LAL), check any of the following Use Attainability Analysis factors that are identified in the classification report:

______ 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

______ 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

______ 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 in the report (include comments on how complete/thorough data is)

______ Biological Data (fish/invert)

______ Chemical Data (temp, D.O., etc.)

______ Physical Data (flow, depth, etc.)

______ Habitat Description

✓ Site Description/Map

✓ Other: photos

Historical Reports in file:

10/24/95 - Paul LaLiberte

10/18/77 - Terry Moe / William West

Additional Comments/How to improve report:

~~Wetland = LAL default~~

- I think that unusual flow patterns are responsible for LFF vs. FAL - is this correct -- check w/ region — & Low flow?

C:\Data\WBUD\UAA resources\Site UAA checklist.doc

Revised 10/24/2003

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: Tuesday September 14, 2004 FILE REF: [Click **here** and type file ref.]

TO: File

FROM: Laura Bub

SUBJECT: 9/13/04 WCR Field Session summary

On Monday September 13, 2004, I attended a field session featuring several sites in the La Crosse area. Regional staff participating in the session were: Dan Helsel, Paul LaLiberte, Cindy Koperski, Mark Hazuga, Ken Schreiber, Pat Oldenburg, Judy Hayducsko, and Charlie Cameron. Over the course of the day, we visited three different sites. The following narrative summarizes some observations from each of the sites.

Maple Grove Country Club
The country club and adjacent property (including residential subdivision) have their own treatment facility. Adjacent to the country club property is a wetland area (degraded) and then Pleasant Valley Creek beyond the wetland. Not far beyond the creek is Interstate 90.

Paul LaLiberte originally classified the stream in 1988, prior to the construction of the treatment facility. At that time, Paul recommended that the treatment be directed to Pleasant Valley Creek via a pipe directly to the flowing water. This was done in an effort to protect the wetland area from degradation. When Paul checked back at the facility in 1994, he realized that rather than pipe effluent to the stream, the treatment plant dug a ditch through the wetland, and discharged their effluent to the ditch. At this point in time, the damage to the site had already been done.

Pleasant Valley Creek appeared to be somewhat prohibited by wetland grasses/plants. Biologists guessed that some of the hydrologic modifications to the site could be due to a change in beaver activity.

Maple Grove Country Club is currently not listed in NR 104, and is therefore considered to have the default classification of Fish and Aquatic Life (WWSF). This site is proposed to be classified as LFF when NR 104 is revised.

Rockland WWTP
This site is an existing discharger that discharges to a wetland tributary to the La Crosse River. The interesting aspect of this site was the splitter box that had been installed. This box effectively split the effluent discharge leaving the plant, and routed it to two separate locations in/near the wetland in order to minimize channelization within the wetland. The sptter box appeared to serve it's purpose, as it was very difficult to even determine where one of the discharge points was located at (the original of the two discharge points was more easily found).

Currently this site is listed in NR104 as LAL, and has been recommended for an LFF designation at such time that NR104 is revised.

Warrens WWTP
Warrens WWTP is currently discharging to groundwater. They are looking at alternatives for a surface water discharge, and are currently exploring several different options. The options included:

WATER QUALITY STANDARDS REVIEW FOR AN WETLAND TRIBUTARY TO THE LA CROSSE RIVER IN LA CROSSE COUNTY NEAR THE DISCHARGE FROM ROCKLAND WWTP T17N, R5W, SECTION 36

Paul La Liberte
October 24, 1995

This waterbody was first evaluated and recommended as a variance water for NR104 in 1975. The classification currently in NR104 is "wetland, capable of supporting marginal aquatic life". The immediate vicinity of the WWTP was inspected again in 1987. This resulted in a 1988 recommendation for continuing the existing aquatic life use classification. An inspection of the waterbody on 10-13-95 forms the basis of this review, which was prompted by the identification of continued, expanded discharge at the existing site as an alternative in Rockland's facility plan. This review includes evaluation for compliance with NR104, NR103 and NR207. The later two deal with antidegradation and wetland standards, which were not in existence in 1988.

The flow patterns in the wetland and surrounding topography indicate that the influence of the WWTP is likely confined to a 20 acre area north of the WWTP. This area is described on the Wisconsin Wetlands map as a persistent wet meadow, palustrine, with wet soil and part of a flood plain complex. The 20 acre area also includes communities dominated by broad leaved, deciduous shrubs. Although not listed on the wetland map, the area also contains about 2 acres of shallow, open water marsh in two areas. The larger of the two is apparently a former river channel (oxbow). The 20 acre wetland is bordered on the north by a deciduous floodplain forest, on the east by a highway, on the south by the WWTP property and agricultural land and on the west by a similar wet meadow community.

The actual outfall was not observed during the inspection, but approximately 1000 sq ft of open water ~~is present in~~ extends out into the wetland about 100' north of the WWTP. Water leaves this open water area through a discrete channel. The presence of sewage slime (aka Sphaerotilus sp.) and the distinct odor of domestic sewage, indicated that the flow in this channel was primarily effluent. The channel travels about 100 ft to the northwest, where it flows into a 2 acre oxbow. The presence of sewage slime along the entire course of this channel indicates that the wetland is not significantly assimilating the wasteload prior to entering the oxbow. Several (3-5) similar small channels (1-2' wide and <.5' deep) route water into the oxbow from the wetland surrounding it to the east and south. The lack of sewage slime in the other channels indicate they carry primarily groundwater.

The wetland vegetation patterns, as well as the prevailing water depths and channel locations, indicate that groundwater was emerging into the wetland along its south side from the base of the hillside. An outlet channel exists on the west end of the oxbow, which travels about 500 feet to its connection with the La Crosse River. The channel is about 2-6 feet wide and had a depth of 4-18 inches at the time of the inspection. It was estimated that this channel maintained a connection with the river at normal river stage. No sewage slime was observed in the outlet channel, indicating that some wasteload assimilation or dilution had occurred in the oxbow.

The original 1975 description of the waterbody makes no mention of channelized flow in the wetland other than to say that the system was connected with the La Crosse River only during periods of flood flow. The precise extent of the evaluation was not described, so it is not possible to determine if channelized flow did not exist or existed but was not noticed. The 1983 USGS map shows a channel leaving the oxbow and none entering it. However, the inflow channels observed on 10-13-95 are too small to show up on a USGS map. The 1975 report also describes the wetland as being dominated by cattails with alder in the areas of higher elevation. The cattails are being displaced by Purple Loosestrife, which dominates a large portion of the wetland today. The expansion of Purple Loosestrife may be contributing to a trend toward channelized flow in the wetland, due to its tendency to grow in dense clumps. The 1987 inspection included only the immediate vicinity of the WWTP and did not look for channelized flow throughout the wetland.

AQUATIC LIFE USE DESIGNATION

The existence of the oxbow with channelized inflow and outflow make it likely that a forage fishery can be maintained during most of the year. The oxbow and its outlet channel are expected to be used by northern pike as a spawning area. Unlike other riparian wetlands along the La Crosse River corridor, the outlet channel allows the escape of newly hatched pike to the river channel under normal, post-spawning flows. This makes the area particularly valuable for seasonal fishery use (based on personal communications with Ken Wright, Jim Holzer and Dave Pericak). In recognition of these expected uses, the following recommendations are made for the 20 acre wetland adjacent to the WWTP and the downstream channel to its confluence with the La Crosse River:

July-February	Limited Forage Fish
March - June	Warmwater Sport Fish

COMPLIANCE WITH WETLAND WATER QUALITY STANDARDS

The existing discharge is affecting wetland hydrology and water quality. The discharge is probably responsible for maintaining the 1000' open water area near the WWTP. Profuse algae growth in this area may be the result of effluent nutrients. The sewage slimes are being maintained by WWTP organic loading The discharge is not wetland dependant, since it could be routed directly to the La Crosse River with no detrimental environmental effect. Therefore, the proposed increased discharge from the facility (from 4,000 to 7,500 gpd) can be allowed only if it is shown that practicable alternatives do not exist and if the discharge is treated so that it does not have significant adverse impacts on wetland functional values.

The increased discharge rate would likely enlarge the open water area near the WWTP somewhat. The residence time of water in the oxbow under baseflow conditions would be slightly shorter and flow in the oxbow outlet channel would be slightly higher. These changes would be unlikely to significantly alter wildlife use, floral diversity, aesthetics or stormwater attenuation. These changes could positively affect fishery use, provided effluent quality was adequate. However, the fishery use would likely still be maintained in the absence of the effluent. The decreased residence time in the wetland could decrease attenuation of the effluent somewhat. Treatment of the effluent to meet criteria

associated with a Limited Forage Fish classification would protect this use. Additional effluent treatment might be needed to protect use by spawning northern pike during the appropriate season (March-June). Wetland water quality standards would be met for an increased discharge to the wetland if sufficient treatment were provided for the maintenance of the recommended aquatic life uses and no practicable alternatives were available.

RECOMMENDED EFFLUENT LIMITS

Effluent limits for the maintenance of Limited Forage Fish criteria in streams should be adequate to protect the recommended year-round Limited Forage Fish classification. This level of treatment might also be adequate to protect seasonal use by spawning northern pike, if temperature and available dilution are considered. A specific effluent limit recommendation for this use is not possible at this time because the ammonia criteria for all classifications are being revised and the amount of available dilution is not known. The amount of dilution should be assessed by measuring flow in the oxbow outlet. The most appropriate time for measurement would be in early June, when the last of the juvenile pike would be leaving the area. An outlet flow measured in November could be substituted, but is likely lower than that typically found in June (based on USGS flow records for the La Crosse River at Sparta and West Salem). WD WRM will attempt to obtain a flow measurement in the channel prior to December 1995.

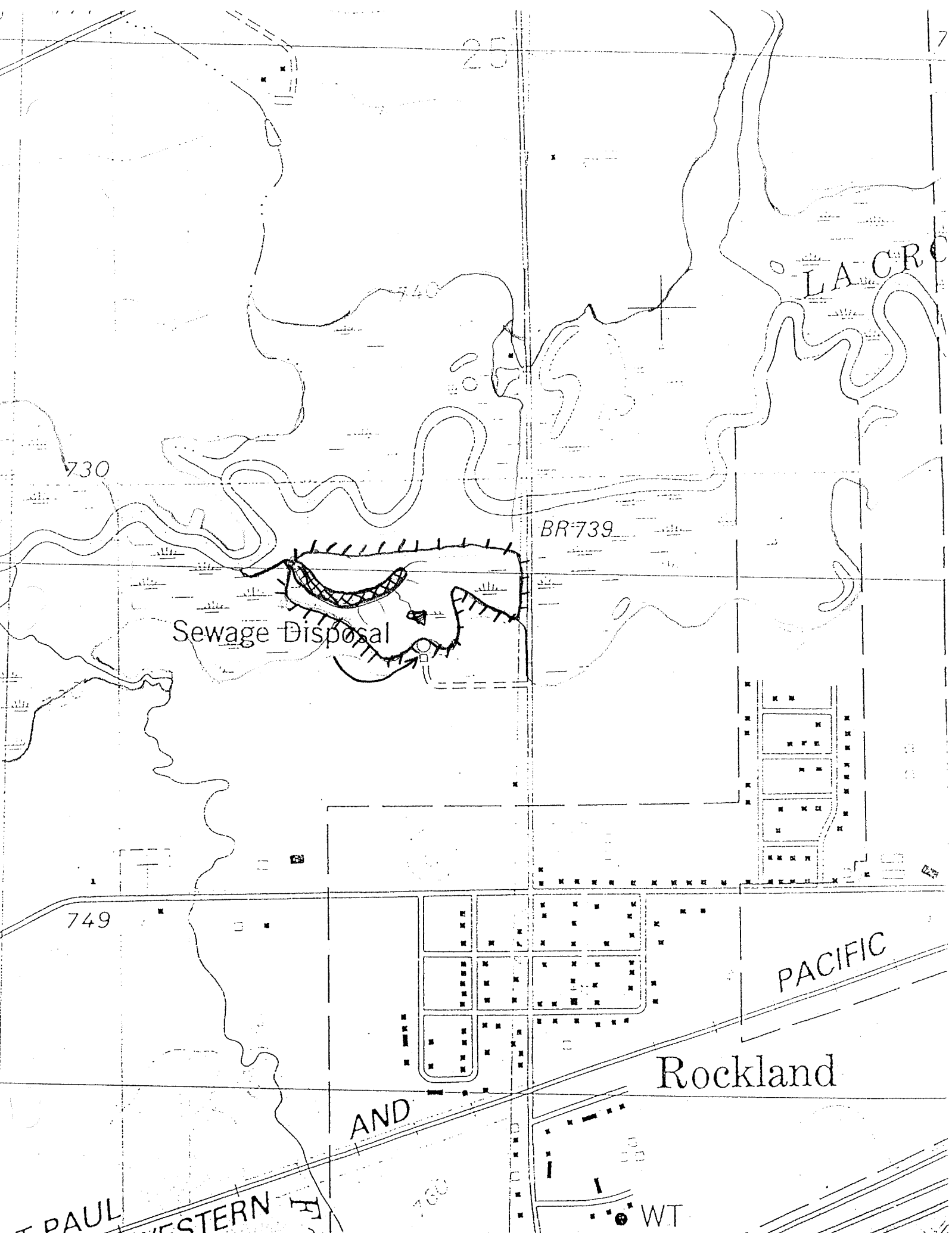
In recognition of channelized flow, it cannot be assumed that the detention time in the wetland is sufficient to remove the need for disinfection. Unless it can be demonstrated through sampling that detention time in the wetland is adequate to meet bacterial guidelines in the oxbow outlet channel, disinfection should be required.

NR207 EVALUATION

Discharges to waters listed in NR104 are expected to meet the significant lowering test of NR207 only in downstream reaches with higher classifications NR207.03 (5) . In this case, the potential impact to the La Crosse River has already been assessed (Limits for Facilities Planning Memo dated June 19, 1995). The assessment concluded that the proposed discharge would not cause a significant lowering of water quality in the river if secondary treatment was provided. This leaves only the seasonal classification of the wetland for spawning fish to be evaluated for compliance with NR207. NR103 allows a discharge from the WWTP only if treatment is adequate to protect the spawning fish and no practicable alternatives exist. If the other alternatives in the facility plan exceed the cost of discharge to the wetland by more than 10% on a capital cost basis or 15% on a total present worth basis, then it would seem that both the economic requirements of the significant lowering test in NR207 and practicable alternative test in NR103 would be passed and the wetland discharge (with adequate treatment) could be permitted. In this circumstance, the entire assimilative capacity of the wetland could be given to Rockland, provided they made demonstrations NR207.04 (1) (a-c) in the facility plan.

rockland.rpt

c. C. Cameron - LAX
P. Trochlell - WR/2
B. Robertson - WR/2
J. Ball - WR/2
B. Masnado - WR/2
T. Gilbert - WW/2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(AD 75)

Joe & Tom

CORRESPONDENCE/MEMORANDUM

STATE OF WISCONSIN

Date: June 8, 1988

File Ref:

To: Rockland Facility File

JUN 1 1988

From: Paul LaLiberte Paul

Subject: Water Quality Standards Review for the Rockland POTW

The wetland receiving discharge from the Rockland POTW was inspected in the summer of 1987. Bacteria sampling of the La Crosse River adjacent to the wetland was conducted to aid in making a decision on disinfection. No change in the aquatic life use classification dated 10-18-77 is warranted. The wetland and the adjacent reach of the La Crosse River above Lake Neshonoc have been classified as partial body contact recreational use (8-28-87).

PL:sz
c: D. Schuettpelz - WR/2
T. Stibbe
PLT394

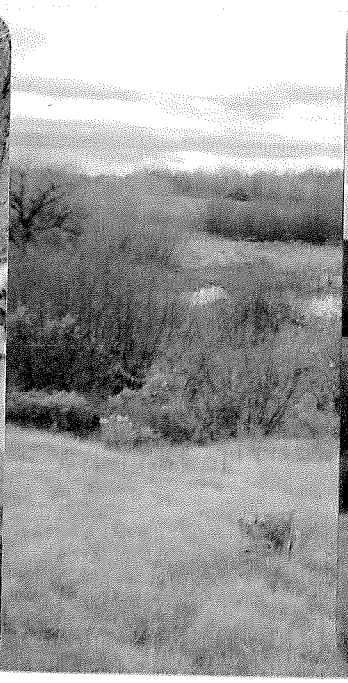
ROCKLAND, LA CROSSE COUNTY

WASTEWATER RECEIVING STREAM CLASSIFICATION

Receiving stream - Drainage area (marsh) tributary to La Crosse River.

Discharge from the Rockland STP is north to a marsh near the La Crosse River. The main body of the marsh is about 30 feet north of the WWTP. Alder is the cover type between the WTP and marsh. The marsh is covered by cattail with higher ground supporting some alder. Higher land (natural grass cover) surrounds the marsh to the south, east and west. Marsh extends north to the La Crosse River with open water marsh areas being connected to the river only at times of flood flow. Some areas of Lemna covered water occur in the marsh with a larger oxbow lake found several hundred feet northwest of the discharge site. La Crosse River is about 450 yards north of the discharge site.

WWTP outfall to wetland - looking north



Overview of WWTP and wetland area receiving discharge - looking west

Wetland receiving area - looking west - La Crosse River is at black, dead tree in center of picture

RECOMMENDATIONS:

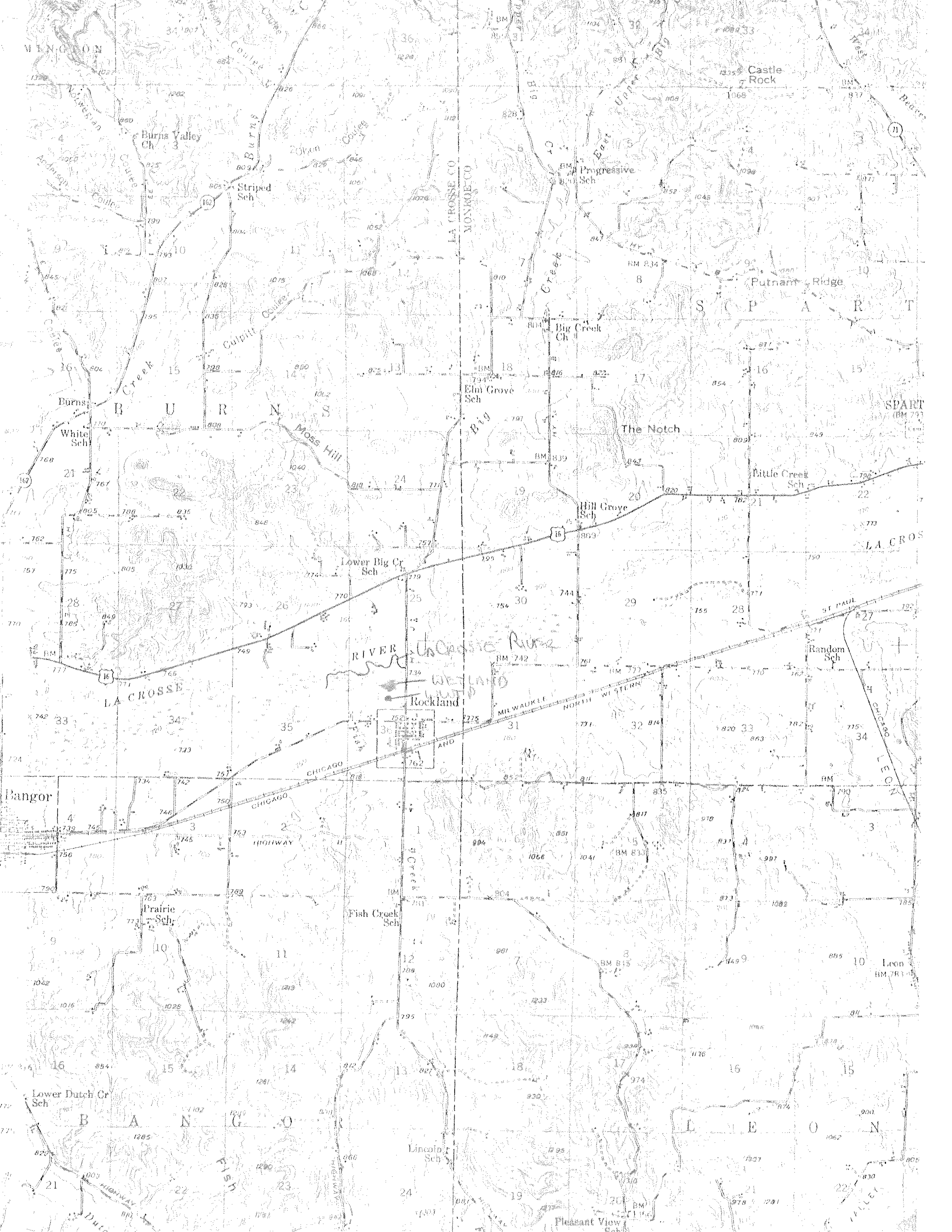
The marsh receiving discharge from Rockland STP shall be classified wetland.

EVALUATION DATE: November 5, 1975

DOCUMENTATION DATE: October 18, 1977

PERSONNEL:

Terry A. Moe - Water Pollution Biologist - WCD (10/18/77, 11/5/75)
William M. West - Biologist - WCD (10/18/77)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MONROE CO
Putnam Ridge
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Big Creek Ch
Elm Grove Sch
The Notch
Burns
B U R N S
White Sch
Moss Hill
Little Creek Sch
Hill Grove Sch
Lower Big Cr Sch
RIVER
LaCrosse River
WETLAND
Random Sch
Rockland
LA CROSSE
MILWAUKEE
NORTH WESTERN
CHICAGO
Bangor
HIGHWAY
Prairie Sch
Fish Creek Sch
Leon
Lower Dutch Cr Sch
B A N G O R
L E O N
Lincoln Sch
Pleasant View Sch