

Region WCR County Marathon Report Date 11/2000 Classification CAL/LFF  
 Water Body: Randall Creek  
 Discharger: Milan WWTP & Foremost Farms

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:**

11/2000 - Mark Haruga  
12/10/74 - Bill Jaeger  
12/18/1975 - Ron Yockim

**Additional Comments/How to improve report:**

- 2000 memo states that stream should be assessed for approp. classin
- could added flow improve aquatic community?
- check w/region on this classin.

DATE: November 27, 2000

FILE REF: [Click **here** and type file ref.]

TO: Foremost Foods Milan File

FROM: Mark Hazuga



SUBJECT: Stream Classification

According to the draft NR 104 document, the classification of Randall Creek is listed as the following: A) Entire Stream above the middle of T29N R3E S21 – Limited Aquatic Life B) From the middle of T29N R3E S21 to the confluence with the Big Eau Pleine River – Limited Forage Fish. The description in the current official NR 104 listing is: A) From the discharge location to the middle North half of sec. 21 T29N R3E – Limited Aquatic Life B) From the above location to Randall Creek – Limited Forage Fish. The different classification description in the draft NR 104 document is not referenced in the facilities file for Milan WWTP or Foremost Farms. I spoke to Bill Jaeger regarding this situation and he indicated that he may have requested this change but he wasn't entirely sure. A permit was issued to Foremost Farms in 1990 and described the receiving streams classification as Limited Aquatic Life. This information seems to suggest the description in the draft NR 104 document is appropriate.

The unnamed intermittent tributary drains approximately  $\frac{3}{4}$  of a mile before joining other intermittent tributaries and then entering the riparian wetland. The 7.5 minute topographic map shows the intermittent tributaries flowing through the wetland and then dispersing in the area of the Milan WWTP discharge to the wetland. The tributary that would receive the Foremost Farms discharge was reported dry during the summer of 2000 by the Basin's Water Management Specialist, who also determined the tributary was not navigable. The addition of wastewater from Foremost Foods to the intermittent tributary may improve habitat and flow conditions, which may improve the fishery.

The classification description in the draft NR 104 document is probably adequate and does correlate with the classification used for the Foremost Farms permit in 1990. This unnamed tributary should be evaluated in the future, along with the discharge of the Milan WWTP, to ensure the receiving waters are being protected.

DATE: November 16, 2000

FILE REF: [Click **here** and type file ref.]

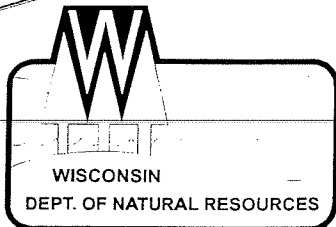
TO: Milan WWTP File

FROM: Mark Hazuga

SUBJECT: Additional NR 103 Evaluation Information

On April 27, 1999, Department staff evaluated the wetland that receives the discharge of the Milan WWTP. The facility requested to increase their discharge to the wetland by approximately double the current rate. Approximately one week prior to the wetland evaluation, the facility was asked to increase the discharge to the wetland at a rate similar to their request. The discharge to the wetland one week prior to the evaluation ranged from 0.02 mgd to .323 mgd and averaged 0.19 mgd. After evaluating the wetland under these discharge conditions, the Department felt that a discharge rate of 0.20 mgd would not likely change the current situation (pertaining to hydrology and vegetation) while the beaver are active in the area. The large beaver dam is referenced in the letter addressed to Procorp Inc. The letter to Procorp Inc. summarized the wetland evaluation and the determination that the increased discharge would not adversely impact the wetland from its current condition.





## State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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June 1999

*MSA*

Tom Probst - Procorp INC.  
10701 West North Avenue  
Suite #301  
Wauwatosa, WI 53226

Dear Mr. Probst:

Thank you for providing the alternative analysis of discharging to the wetland at Milan. This alternative analysis is a requirement of NR 103 Wisconsin Administrative Code. The alternatives we examined were substantially more expensive (28%) than discharging to the current location of the wetland.

The hydrology of the wetland is controlled by a large beaver dam located in the eastern portion of the wetland. Consequently, the wetland vegetation has changed from a shrub-carr/tag alder wetland to a shallow open water marsh. While the beaver dam controls water levels in the wetland, the historic addition of water from the WWTP may have facilitated beaver migration to the area. In any event, enough water flowing through the wetland has accommodated the beaver to build a dam creating the current open water conditions and vegetation. The proposed additional flow from the WWTP will not likely change the current situation (pertaining to hydrology and vegetation) while the beaver are active in this area.

Since the level of treatment will be improved, it is unlikely there will be an adverse impact to the wetland from a water chemistry standpoint.

The impact of extra flow causing toxic levels of ammonia to go through the wetland and reach the unnamed tributary and Randall Creek is unknown. We collected water chemistry samples twice this spring, however samples were not collected during a discharge of high ammonia levels. We have no data to determine how ammonia travels through the wetland. At this point, the data collected is inconclusive and we as a Department need to rely on professional judgment. We made observations of the effluent traveling through the wetland and found that channelized flow is lost and becomes sheet flow through the cattail marsh. We also observed that effluent suspended solids were lost in this area. Sheet flow through the cattail wetland prior to reaching an openwater wetland (beaver pond) has significant potential for attenuating waste loads. Also, additional attenuation would occur as a result of retention time in the beaver pond. However, the rate of attenuation cannot be estimated because retention time, travel time and extent of ice cover is unknown.

Since there is a reasonable potential that wastewater will be attenuated before reaching the stream, our recommendation is to proceed with the expansion of wastewater volume. After the expansion, water quality of the stream below the beaver dam will be evaluated in the winter. This time of year is a concern because biological processes would not be attenuating the waste load as they would during spring, summer and fall. The evaluation would include monitoring for compliance with water quality standards.

If you have any questions please call me at 715-359-2580.

NR103 Wetland Review for the Milan Sanitary District  
Marathon County, WI-0031500

Milan treats its wastewater with a three cell lagoon system that has a design flow of 0.062 MGD. The treatment system has been usually operated with an intermittent discharge but can also be operated as a continuous discharge. The effluent is piped to a wetland tributary to Randall Creek. Much of the wastewater flow through the treatment system is from a cheese factory that has discharged high phosphorus concentrations to the treatment system. In 1988 the mixed industrial and municipal wastewater effluent total phosphorus concentration ranged as high as 273 mg/l. Since then the cheese factory has changed processes and made efforts to reduce phosphorus discharge. The mean of monthly effluent sampling from November 1993 to September 1994 was 23.8 mg/l total phosphorus. A compliance schedule will be included in the upcoming discharge permit reissuance to limit the effluent concentration to one or two mg/l of total phosphorus. Milan's limit for BOD<sub>5</sub> is 20 mg/l and there is a 60 mg/l suspended solids limit because of planktonic algae in the lagoons.

The wetland that receives the Milan wastewater effluent encompasses an area of about 300 acres. It has several short intermittent tributaries that drain an agricultural landscape which contains some woodland. The wetland has an outlet that flows to Randall Creek. Typically there is water flowing in the outlet but during drought it has been completely dry. At times minnow sized fish have been spotted in the outlet at the first downstream road crossing. The revised wetland map indicates most of the wetland supports a mix of broad-leaved deciduous trees and broad-leaved deciduous shrubs. Some areas are mapped as persistent emergent vegetation. A tour of the wetland on December 14, 1994 confirmed the map is correct in the area of the wastewater discharge. One of the areas of persistent emergent vegetation is in the immediate area of the wastewater discharge. It is about 10 acres in size and is strongly dominated by cattail. This cattail stand may have established because of the hydraulic and nutrient loading from the wastewater discharge. Photographs taken from an airplane in 1976, before the first wastewater discharge at this site, show it was a continuum of the mixed tree and shrub vegetation that covers most of the wetland. Mixed with the cattail are a number of dead trees confirming a change in vegetative cover. The cattail stand coincides with the area where the effluent would be visualized to mix and spread through the wetland. Its appearance is analogous to a discharge plume in a flowing stream. There are no other apparent influences that could have caused this vegetation change.

The Milan wastewater effluent appears to have changed the character of part of the wetland that receives its effluent. Since the effluent has been discharged at this site for 16 years, removal of the discharge from the wetland would result in a new disturbance which is likely to cause further changes in the wetland. It is not known if the vegetation has reached an equilibrium with current discharge. The area of disturbance could be expanding as the wastewater discharge continues. The phosphorus load in the effluent has been substantially reduced and will be further reduced upon implementation of the phosphorus limit in the upcoming permit. This reduction of nutrient concentration and load may reduce the impact to the wetland. No increase in

design effluent hydraulic load is planned for the reissued permit. Alternatives to continued discharge to the wetland could include a groundwater disposal system or extending the discharge piping by approximately one mile for direct discharge to a stream channel tributary to Randall Creek. Both of these alternatives would cause significant disturbance of land surface and changes in existing plant communities on the disturbed sites.

Since no increased discharge has been proposed for this permit issuance the best alternative is to continue the discharge to the wetland at the existing location. Reissuance of this WPDES permit will not result in significant adverse impacts to the functional values of this wetland and complies with water quality standards in NR 103.

Prepared by:

*William C. Jaeger 4/19/95*

William C. Jaeger  
Water Resources Biologist

STATE OF WISCONSIN  
DIVISION OF HIGHWAYS

ECOLOGICAL AND NATURAL HISTORY SURVEY

MILAN QUADRANGLE  
WISCONSIN-MARATHON CO.  
7.5 MINUTE SERIES (TOPOGRAPHIC)

NW 1/4 STRATFORD 15' QUADRANGLE

294 II SW  
(CORINTH)

294 II SE  
(AHEMS)

R 2 E R 3 E

722

723

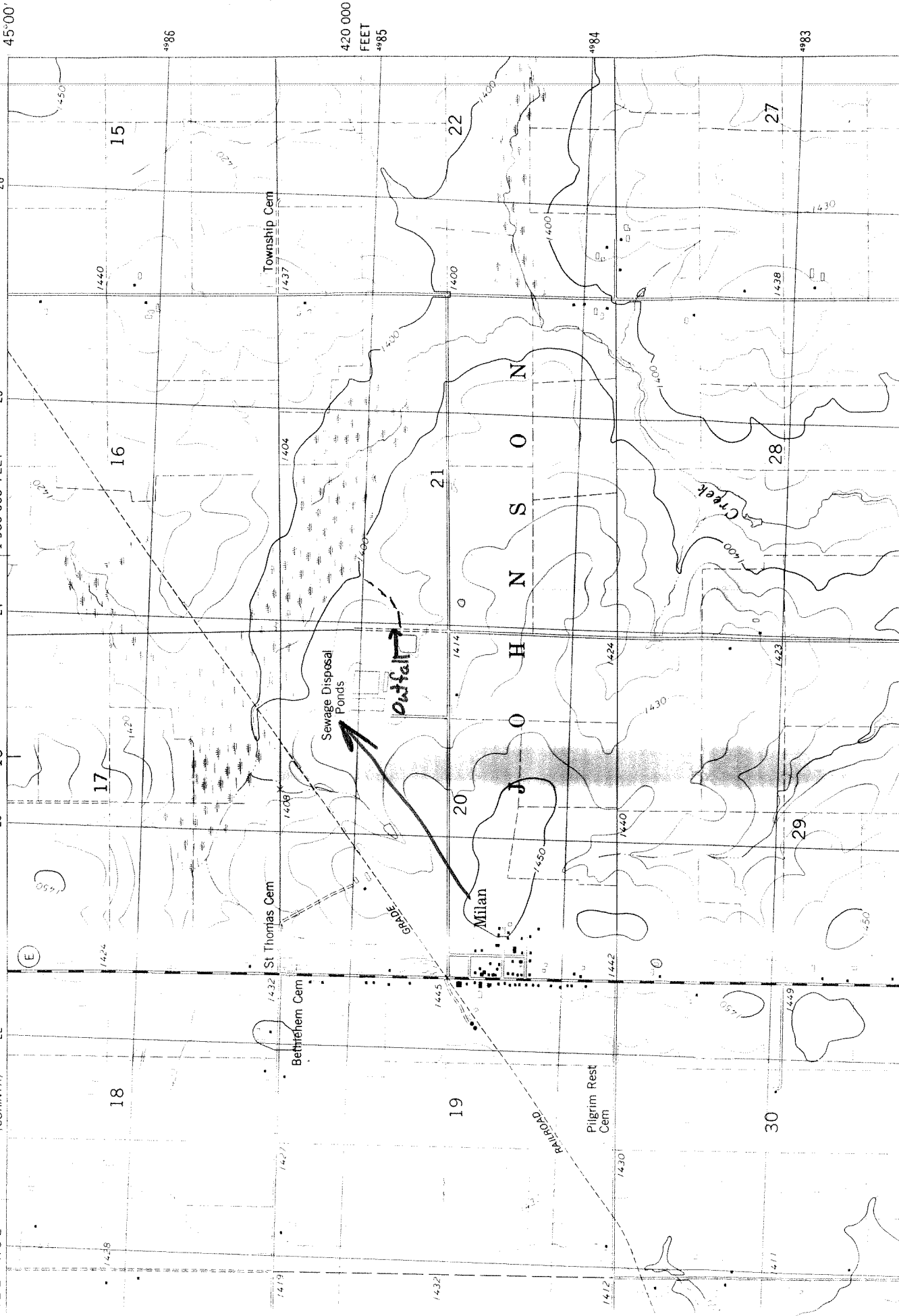
10'

1 960 000 FEET

725

726

90°07'30" 45°00'



420 000  
FEET  
4985

4984

4983

Wetland Inventory Map, Revised 4/19/87  
T29 N, R3 E



## Milan, Marathon County

### Wastewater Receiving Stream Classification

The Village of Milan is considering two sites for disposal of effluent from a proposed municipal sewage system. One proposed site is about a mile east of Milan near the north half of the border between sections 20 and 21. The discharge at this site would be to a wetland that is the source of Randall Creek. The proposed discharge area is a wetland of cattails and tag alder, and there is no defined channel from this area to Randall Creek. Randall Creek originates at the lower end of the wetland in the middle north half of section 21 and then flows through pasture and woodland a distance of nine miles before it joins the Big Eau Pleine River. Although the 7-day  $Q_{10}$  has not been determined for this site, it is almost certainly zero because the drainage area is less than two square miles. During the summer of 1976 there was no flow throughout most of the length of Randall Creek.

During the summer when Randall Creek was dry, no fish life was seen in the remaining pools but a spring survey found a minnow trap containing several species of minnows about a mile below the proposed discharge site.

Recommendation: Randall Creek shall be classified as a wetland down to the middle north half of section 21, T29N, R3E, where it forms a channel. From that point down to its confluence with the Big Eau Pleine River, Randall Creek should have the noncontinuous hydrologic classification and the "not supporting a balanced aquatic community" water quality classification. E

### Marsh Creek

The second alternative is Marsh Creek west of Milan. Marsh Creek originates from diffuse surface water at the proposed site and has a drainage area of less than one square mile and the 7-day  $Q_{10}$  is zero. During the summer of 1976 there was no flow in the entire length of Marsh Creek. The streambank is almost entirely pasture land with a few small woodlots scattered along it.

When Marsh Creek was flowing in the spring of 1976, no aquatic life was found until the crossing of the first town road north of State Highway 29. There one creek chub and a few leeches were found until a pool at the town road crossing between sections 7 and 12, T28N, R2E.

Recommendation: Marsh Creek shall be classed as diffuse surface water until the middle of section 19, T29N, R3E. From that point it is non-continuous and "marginal" until the bridge at the town road between sections 25 and 36, T29N, R2E. From that point and down to Randall Creek it shall be classified noncontinuous and "not supporting a balanced aquatic community".

12/10/76  
P. J. R.

It is further recommended that the Randall Creek site may be preferable from the aspect of problems to riparian owners along the stream. Marsh Creek is very small the first 1.5 miles below the proposed site and flows through farmland and very near several barnyards. Complaints of flooding caused by the discharge are likely. The Randall Creek discharge is to a marsh and no esthetic or flooding problems would be expected there.



Proposed wetland discharge  
site (Randall Creek).



Aerial view of proposed  
wetland site.