

Bub, Laura A

From: Franson, Lon J.
Sent: Friday, July 08, 2005 2:51 PM
To: Jaeger, William
Cc: Bub, Laura A; Roesler, Craig P.; Watson, Susan S.
Subject: RE: NR 104: June 30th feedback needed - Rib Lake wwtp

No, Rib Lake WWTP could **not** consistently meet the BOD limits of the new classification. BOD limits would be 8 mg/l summer and 16 mg/L winter. I do not think ammonia would be a problem for this facility for either classification.

As the facility is operating well, is well run, and there is no other reason for facility planning in the near future (in part because they will not have problems with ammonia) a change in this round of revisions would not be appropriate in my opinion.

Lon J.

DNR Environmental Engineer
10220 N State Road 27
Hayward, WI 54843
715-634-9658 ext. 3514
fax 715-634-9232

-----Original Message-----

From: Jaeger, William
Sent: Wednesday, June 29, 2005 3:34 PM
To: Franson, Lon J.
Cc: Bub, Laura A; Roesler, Craig P.; Watson, Susan S.
Subject: FW: NR 104: June 30th feedback needed - Rib Lake wwtp

Lon J.,

Please verify Craig's comment on whether Rib Lake wwtp could likely meet limits for a "Diverse Fish and Aquatic Life" (warm water sport fish) classification. Also please let us know if there are other things we should consider in deciding whether to include Sheep Ranch Creek in the first round of stream classification revisions.

I see the low flow is only 0.20 cfs so I would expect some restrictive limits when it is reclassified. I'm sure Laura would like to have word directly from you, the Basin Engineer, to back up the decision on changing the code.

Thanks

William C. Jaeger
Water Quality Biologist
Wisconsin Department of Natural Resources
107 Sutliff Ave.
Rhineland, WI. 54501-3349
phone: (715) 365-8971
fax: (715) 365-8932
e-mail: william.jaeger@dnr.state.wi.us

-----Original Message-----

From: Roesler, Craig P.
Sent: Wednesday, June 29, 2005 2:56 PM
To: Bub, Laura A
Cc: Jaeger, William
Subject: RE: NR 104: June 30th feedback needed

Lon J. Franson is our wastewater engineer who deals with the facility. He told me he didn't think they could meet WWSF limits with the existing plant. You may want to contact him directly to confirm this.

Craig Roesler

Water Quality Biologist, Upper Chippewa Basin
Wisconsin Dept. of Natural Resources
10220 State Hwy. 27
Hayward, WI 54843

phone: 715-634-9658 ext. 3522
fax: 715-634-9232
e-mail: craig.roesler@dnr.state.wi.us

-----Original Message-----

From: Bub, Laura A
Sent: Wednesday, June 29, 2005 9:23 AM
To: Roesler, Craig P.
Cc: Jaeger, William
Subject: RE: NR 104: June 30th feedback needed

Thanks for sending the new documentation. Should the change to WWSF take place in the current NR 104 revision? That is, will the discharger be negatively impacted by the change, or is their facility able to accommodate the potential change in effluent limits? If it will not be an issue for the discharger, I will include it as part of the current change. However, if it will impact the discharger in a negative manner, I would propose that we leave the LFF, for now (since it's already in code, and we did not previously propose a change) and indicate that this change will happen as part of the NEXT code revision. That would give you guys time to give the facility a heads-up to the change, if that hasn't already been done. What are your guys' thoughts?

Laura Bub
Bureau of Watershed Management
(608) 261-4385

-----Original Message-----

From: Roesler, Craig P.
Sent: Monday, June 27, 2005 4:34 PM
To: Kreitlow, James D.; Bub, Laura A
Subject: RE: NR 104: June 30th feedback needed

Entry #211 on the list is Sheep Ranch Creek (Rib Lake, Taylor Co.). A use designation report for that stream was submitted to Bill Jaeger a few months ago. It recommended that the use designation be changed from LFF to WWSF.

Craig Roesler
Water Quality Biologist, Upper Chippewa Basin
Wisconsin Dept. of Natural Resources
10220 State Hwy. 27
Hayward, WI 54843
phone: 715-634-9658 ext. 3522
fax: 715-634-9232
e-mail: craig.roesler@dnr.state.wi.us

-----Original Message-----

From: Kreitlow, James D.
Sent: Thursday, June 16, 2005 1:58 PM
To: Toshner, Pamela J; Cahow, James M.; Roesler, Craig P.; Jaeger, William; Koshere, Frank
Cc: Bub, Laura A; Masnado, Robert; Schmidt, James W; Jerow, Thomas S.; Aartila, Tom P.; Lahti, Duane J.; Bashaw, Thomas; Bartilson, Kathy M.
Subject: FW: NR 104: June 30th feedback needed
Importance: High

Good Afternoon
This is just a reminder. Hopefully you will have a chance to review this and get any new information to Laura Bub. Please let me know if you responded.

Jim

-----Original Message-----

From: Kreitlow, James D.
Sent: Friday, June 03, 2005 9:30 AM
To: Cahow, James M.; Roesler, Craig P.; Toshner, Pamela J; Koshere, Frank; Jaeger, William
Cc: Bartilson, Kathy M.; Bashaw, Thomas; Lahti, Duane J.; Aartila, Tom P.; Jerow, Thomas S.; Bub, Laura A; Masnado, Robert; Schmidt, James W
Subject: FW: NR 104: June 30th feedback needed
Importance: High

Good morning

I know the field season is upon us, but it would be great if we could provide some time to this as a region. It would be nice to get this cleared up once and for all. Please review the spreadsheet Laura has provided and provide her with additional documentation if we have it. If you have any questions regarding a classification please call Bill Jaeger. Bill I hope you do not mind responding to questions and working on this.

Thank you.

Jim

-----Original Message-----

From: Bub, Laura A
Sent: Tuesday, May 31, 2005 2:59 PM
To: DNR_WD_WT_STRMBIOL
Cc: Masnado, Robert; Schmidt, James W; Bub, Laura A
Subject: NR 104: June 30th feedback needed
Importance: High

Good afternoon--

In an attempt to make some progress on the NR 104/WBUD effort, we are planning to take a revised Green Sheet to the Natural Resources Board at the October 2005 board meeting. At that time, we will ask for permission to go out to public hearing again. The new green sheet package that we plan to submit will include an updated listing of stream segments to be included in NR 104. The "new" list will be based on the list that was included in the previous (December 2001) Green Sheet, with revisions made, as are appropriate. Segments will be added and/or dropped from the list per the advice from regional biologists, where supporting documentation has been provided. Similarly, if Central Office staff determine that the documentation to support a waterbody segment is inadequate, that segment will NOT be included on the NR 104 list. If the decision to drop a segment would result in a negative impact to a discharger, we will have to evaluate those specific scenarios. The bottom line is that **we can not move forward with designations that do NOT have accurate and adequate supporting documentation / justification.**

I have attached a spreadsheet detailing where there still appears to be files with lacking documentation. Please look at the segments listed for your region, and provide me with the appropriate documentation on the status of these waters. In order for me to have time to process the documentation and prepare a new NR 104 list for the green sheet, **I need to receive ALL documentation to complete files by Thursday, June 30th.** If I do not have documentation by June 30th, the list of segments listed in the green sheet will need to be amended appropriately (i.e. segment not included). I am more than willing to travel to your region, conference call, etc. to discuss these files if you think that it would be effective in helping resolve the documentation issues.

<< File: Jun05_NR104_Don't move forward.xls >>

If you have questions about this e-mail or spreadsheet, please let me know. Thanks in advance for your attention to this during a very busy time of the year!

Laura Bub
Bureau of Watershed Management
(608) 261-4385

(Attach supporting data sheets)

Use Designation Information – Required

Water Body Name Sheep Ranch Creek	WBIC # 1467900	Date 02/15/2005
Region: <input type="checkbox"/> NER <input checked="" type="checkbox"/> NOR <input type="checkbox"/> SCR <input type="checkbox"/> SER <input type="checkbox"/> WCR	Basin Upper Chippewa	County Taylor

Quad Map Where Segment is Shown

Rib Lake
 Reference Site(s) (Attach use designation form for reference site/cond.)

Segment Description for Segment 1 of 1 (headwater = segment 1)

From: the junction of Sheep Ranch Creek with the Big Rib River upstream <u>3280</u> <input type="checkbox"/> mi., <input type="checkbox"/> km., <input checked="" type="checkbox"/> ft., <input type="checkbox"/> M.	Latitude: DEG MIN SEC 45 18 22.2000 N Longitude: DEG MIN SEC Datum Used 090 12 25.3000 W NAD 83 Township Range <input checked="" type="checkbox"/> E Section ¼-Section ¼, ¼-Section 33 N 02 <input type="checkbox"/> W 35 SE SW
--	--

To: the Rib Lake WWTP outfall	Latitude: DEG MIN SEC 45 18 41.4000 N Longitude: DEG MIN SEC Datum Used 090 12 51.8000 W NAD 83 Township Range <input checked="" type="checkbox"/> E Section ¼-Section ¼, ¼-Section 33 N 02 <input type="checkbox"/> W 27 SE SW
----------------------------------	--

Attach site map and photos (prefer digital) showing stream segment and discharge point. Date Fieldwork Conducted/Completed 05/13/2004	Use Designation Status: <input type="checkbox"/> New Use Designation (First Field Assessment) <input checked="" type="checkbox"/> Standards Review (Updating Previous Field Assessment) <input type="checkbox"/> Reference Site
---	--

Current Codified Fish and Aquatic Life Use Designation: <input type="checkbox"/> Coldwater Community <input type="checkbox"/> Warmwater Sport Fish Community <input type="checkbox"/> Warmwater Forage Fish Community <input checked="" type="checkbox"/> Tolerant Fish and Aquatic Life Community (LFF) <input type="checkbox"/> Very Tolerant Aquatic Life Community (LAL)	<input type="checkbox"/> Default <input type="checkbox"/> Field Assessment – Date (mm/dd/yyyy): _____	Existing FAL Use Based on Current Data: <input type="checkbox"/> Coldwater Community <input checked="" type="checkbox"/> Warmwater Sport Fish Community <input type="checkbox"/> Warmwater Forage Fish Community <input type="checkbox"/> Tolerant Fish and Aquatic Life Community (LFF) <input type="checkbox"/> Very Tolerant Aquatic Life Community (LAL)
---	--	---

Recommended Attainable Use Designation: <input type="checkbox"/> Coldwater A (Coldwater) <input type="checkbox"/> Coldwater B (Coldwater) <input checked="" type="checkbox"/> Diverse Fish and Aquatic Life <input type="checkbox"/> Tolerant Fish and Aquatic Life (LFF) <input type="checkbox"/> Very Tolerant Aquatic Life (LAL)	Recommended Seasonal Use Designation(s): <input type="checkbox"/> Coldwater A (Coldwater) <input type="checkbox"/> Coldwater B (Coldwater) <input type="checkbox"/> Diverse Fish and Aquatic Life <input type="checkbox"/> Tolerant Fish and Aquatic Life (LFF) <input type="checkbox"/> Very Tolerant Aquatic Life (LAL)	Effective Date: (mm/dd/yyyy) _____ to _____ _____ to _____ _____ to _____ _____ to _____
--	--	--

Other Applicable Uses (as recognized by existing administrative rule): <input type="checkbox"/> Outstanding Resource Water <input type="checkbox"/> Exceptional Resource Water <input type="checkbox"/> Great Lakes System <input type="checkbox"/> Public Drinking Water Supply <input type="checkbox"/> Recreational Use <input type="checkbox"/> Wildlife	Community Types: <input type="checkbox"/> Class I Trout <input type="checkbox"/> Class II Trout <input type="checkbox"/> Class III Trout <input type="checkbox"/> Coldwater A <input type="checkbox"/> Coldwater B <input checked="" type="checkbox"/> Game Fish <input type="checkbox"/> Non-Game Fish <input type="checkbox"/> Macroinvertebrates <input type="checkbox"/> Endangered/Threatened Species <input type="checkbox"/> Intolerant Species <input type="checkbox"/> Coolwater <input type="checkbox"/> Tolerant Fish <input type="checkbox"/> Tolerant Macroinvertebrates
--	--

Fish and Aquatic Life Use Designation Summary

Form 3200-121 (12/04)

Page 3 of 6

Water Body Name Sheep Ranch Creek	WBIC # 1467900	Date 02/15/2005
--------------------------------------	-------------------	--------------------

Field Assessment Data and Observations – Use Attachment C, if necessary

Assessment Date (mm/dd/yyyy) 05/13/2004	Additional Assessment Date(s): 08/19/2003
--	--

<p>Stream Segment Physical/Chemical Data:</p> <p>Length <u>122</u> <input type="checkbox"/> feet <input checked="" type="checkbox"/> meters <input type="checkbox"/> miles</p> <p>Avg. Width <u>12</u> <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters</p> <p>Max. Width _____ <input type="checkbox"/> feet <input type="checkbox"/> meters</p> <p>Avg. Depth <u>1.5</u> <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters</p> <p>Max. Depth _____ <input type="checkbox"/> feet <input type="checkbox"/> meters</p> <p>Gradient _____ Velocity _____</p>	<p>Substrate Material:</p> <p>Silt _____% Organic <u>90</u>%</p> <p>Rubble _____% Gravel <u>5</u>%</p> <p>Sand <u>5</u>% Other _____%</p> <hr/> <p>Stream Flow _____ cfs <input type="checkbox"/> Measured <input type="checkbox"/> Estimated</p> <p>At time of assessment, flow was: <input type="checkbox"/> High <input type="checkbox"/> Low <input type="checkbox"/> Very Low</p> <p>7Q2 Flow <u>0.46</u> cfs</p> <p>7Q10 Flow <u>0.20</u> cfs</p>
---	--

Stream Temperature 13.7 °C Instantaneous 24-Hr. Maximum 24-hr. Avg.

Dissolved Oxygen (Instantaneous) 4.6 mg/L Time of Day 02 : 00 am pm

Minimum Dissolved Oxygen Recorded _____ mg/L Time of Day _____ : _____ am pm

Maximum Dissolved Oxygen Recorded _____ mg/L Time of Day _____ : _____ am pm

Method of Analysis: Meter Modified Winkler Method

<p>Effluent Flow:</p> <p>Daily Average _____ cfs <input type="checkbox"/> Measured <input type="checkbox"/> Estimated</p> <p>Design Flow _____ cfs (Convert MGD to cfs by multiplying by 1.55)</p>	<p>Chemical Data Collected: (STORET # _____)</p> <p><input type="checkbox"/> Ammonia <input type="checkbox"/> Pesticides <input type="checkbox"/> Other: _____</p> <p><input type="checkbox"/> Atrazine <input type="checkbox"/> Phosphorus <input type="checkbox"/> Other: _____</p> <p><input type="checkbox"/> Bacteria <input type="checkbox"/> Metals <input type="checkbox"/> Other: _____</p>
---	---

Brief Interpretation/Comments:
 The mid-day D.O. concentration was surprisingly low for May. Organic sediment, high water extending into adjoining wetlands, and sluggish flow due to a wide, deep channel upstream of the site may account for it.

Habitat – Use Attachment D, if necessary

Procedure: Guidelines For Evaluating Fish Habitat in Wisconsin Streams (Simonson, Lyons and Kanehl, 1994)

Development and Evaluation of a Habitat Rating System For Low Gradient Wisconsin Streams

Other – Describe: _____

Habitat Rating – Attach Habitat Rating Forms: Excellent Good Fair Poor

Significant Problems Affecting Use Attainment:

Low-flow Sedimentation Bank Erosion Ditching Fish Cover Depth

Other – Describe: _____

Observations About Habitat Quality:
 Dominance of organic substrate reduces habitat quality.

Water Body Name	WBIC #	Date
Sheep Ranch Creek	1467900	02/15/2005

Biological Data – Fish data is required

Fish:

Sampling Date (mm/dd/yyyy) 05/13/2004

Species List and IBI Forms: Attached to Report Not Applicable

Survey Location(s) _____

Distance Sampled 122 feet meters miles

Sampling Gear: Backpack Shocker Other – Describe: mini-boom shocker

Number of Species Collected 12 Total Number of Fish Collected 72

Number of Intolerant Species _____ % Intolerant Species _____

Endangered or Other Special Category Species Collected:

Species _____	No. of Individuals Collected _____
Species _____	No. of Individuals Collected _____
Species _____	No. of Individuals Collected _____

IBI Score _____ Rating _____

Macroinvertebrates:

Sampling Date (mm/dd/yyyy) _____ HBI FBI

Survey Location(s) _____

Sampling Procedure _____

Less than 100 organisms were found – List Dominant Genera, etc.:

Genus _____	Number Found _____	HBI Score _____
Genus _____	Number Found _____	HBI Score _____
Genus _____	Number Found _____	HBI Score _____

More than 100 organisms found – Attach taxonomy bench sheet or other analyses

Other Biological Data/Observations – Use Attachment E, if necessary

Game fish were present in significant numbers on 2 monitoring dates. On 08/19/2003, >6 gamefish/100m were present. On 05/13/2004, 29.5 game fish/100m were present. Two trout were present on 08/19/2003 and trout were found on 08/12/1975, but trout use of this segment appears to be marginal. No trout were present in spring. Cooler effluent temperature might attract trout in summer.

Interpretations Based on Existing Fish and Aquatic Life Community – Use Attachment F, if necessary

Warm water sport fish is the recommended use designation.

WATERSHED DATA AND OBSERVATIONS – Optional (Please answer to the best of your ability. Estimates are acceptable.)

Approximate Area _____ Acres Square Miles

Land Use: Crop Land _____% Pasture _____% Forest _____%

Grass Land _____% Urban _____% Wetland _____%

Number of Feedlots/Barn Yards Near Stream _____

Other Nonpoint Sources _____

Fish and Aquatic Life Use Designation Summary

Form 3200-121 (12/04)

Page 5 of 6

Water Body Name	WBIC #	Date
Sheep Ranch Creek	1467900	02/15/2005

WATERSHED DATA AND OBSERVATIONS (continued) – Use Attachment G, if necessary

Is this watershed currently or proposed to receive nonpoint source management under a State, Federal or local organization?

No Yes List Date(s) (mm/dd/yyyy) _____

Explain _____

Discuss nonpoint source impacts and controllability, and nonpoint relationship to fish and aquatic life existing and attainable uses. Include factors such as bank erosion, land cover/use near stream, gully erosion, barnyards, etc. (attach additional sheets if required):

VTAL/TFAL Justification – Required – Use Attachment H, if necessary

Note: This section must be completed when the use designation is tolerant fish and aquatic life (formerly LFF) or very tolerant aquatic life (formerly LAL)

Recommended Attainable Use Designation: TFAL VTAL

Tolerant Fish and Aquatic Life and Very Tolerant Aquatic Life use designations (LFF & LAL) are not defined as full fish and aquatic life uses. However, these uses are in most cases the best use that can be attained by these resources due to habitat or water quality limitations. A designated use recommendation into one of these sub-categories must be based on one or more of the following factors (sec. 283.15, Stats.). Check all that apply to this use designation and provide a brief description of the situation:

- a. Naturally occurring pollutant concentrations prevent the attainment of a full fish and aquatic life community.
- b. Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of a full fish and aquatic life community, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating water conservation requirements.
- c. Human caused conditions or sources of pollution prevent the attainment of a full fish and aquatic life community and cannot be remedied or would cause more environmental damage to correct than to leave in place.
- d. Dams, diversions or other types of hydrologic modifications preclude the attainment of a full fish and aquatic life community, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of a full fish and aquatic life community.
- e. Physical conditions related to the natural features of the water body, such as the lack of proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of a full fish and aquatic life community.

Description:

Prepared By

Preparer Signature	Printed Name	Date Prepared
	Craig Roesler	02/15/2005

Fish and Aquatic Life Use Designation Summary

Form 3200-121 (12/04)

Page 6 of 6

Water Body Name	WBIC #	Date
Sheep Ranch Creek	1467900	02/15/2005

Author and Peer Review

The author should submit a peer-reviewed report to Watershed Program Coordinator for review and approval.

Submitted By	Date
Peer Reviewed By	Date

Approval Signatures

Review, approval, and signature by the Watershed Program Coordinator (Expert), Regional Water Leader (or designee) as well as the Water Quality Standards Section Chief (or designee) is required.

Printed Name of Watershed Program Coordinator (Expert)	Watershed Program Coordinator (Expert) Signature	Date
Printed Name of Regional Water Leader (or designee)	Regional Water Leader (or designee) Signature	Date
Printed Name of Water Quality Standards Section Chief (or designee)	Water Quality Standards Section Chief (or designee) Signature	Date

Final Report Distribution List

Once the Use Designation Report has been approved by the Water Quality Standards Section Chief (or designee), the report can be distributed to the appropriate individuals, as listed below. Please indicate below individuals who should be copied on final report distribution. It should be noted that the classification recommendation in the report does not become official until it is approved by the Natural Resources Board and adopted into Wisconsin Administrative Code.

Facility Contact _____

Basin Engineer _____

Basin Planner _____

Effluent Limits Calculator _____

Endangered Resources _____
(when T&E Species Present)

Other Interested Parties:

**2003-2004 MONITORING DATA FOR SHEEP RANCH CREEK
NEAR THE RIB LAKE WASTEWATER TREATMENT PLANT OUTFALL**

The fish community of Sheep Ranch Creek downstream of the Rib Lake wastewater treatment plant outfall was assessed on August 19, 2003. A backpack shocker was used. Drought conditions existed, but there was still substantial streamflow. There was also effluent being discharged from the plant. Water temperature was 72° F. A 15 m segment was assessed immediately below the outfall (outfall at N45° 18' 41.4", W90° 12' 51.8"; see figure 1). Thick deposits of soft sediment downstream prevented assessing a longer segment. The segment had a heavy coating of duckweed that limited visibility and prevented the capture of additional fish that were present. There was a strong sewage smell present. The fish species found and the number of each were:

<u>Species</u>	<u>Number</u>
common shiner	7
largemouth bass	5 (1.9 – 2.7")
brook trout	2 (8.9", 10.1")
golden shiner	2
white sucker	2
bluegill	1

no. species = 6

total no. of fish = 19

percent of non-game fish not tolerant to low D.O. = 81.8 %

no. of salmonids = 2

no. of game fish / 100 m = ≥ 6

A second fish assessment was made on May 13, 2004 using a mini-boom shocker. A 122 meter segment of the stream was shocked (between site 1 and 2 in figure 1; downstream = N45° 18' 40.4", W90° 12' 49.7"; upstream = N 45° 18' 42.3", W90° 12' 53.6"). The channel split into two small channels at the lower end of this segment which prevented passage of the mini-boom shocker further downstream. At site 1, above the outfall, water temperature was 13.7°C (56.7° F). D.O. was 4.6 mg/l, pH was 6.6, and conductivity was 100 uS/cm. Flow could not be reliably estimated, but there was at least several cfs. In the segment assessed channel width averaged 12 feet and depth averaged 1.5 feet. Substrate was mostly muck. Fish species found and numbers of each were:

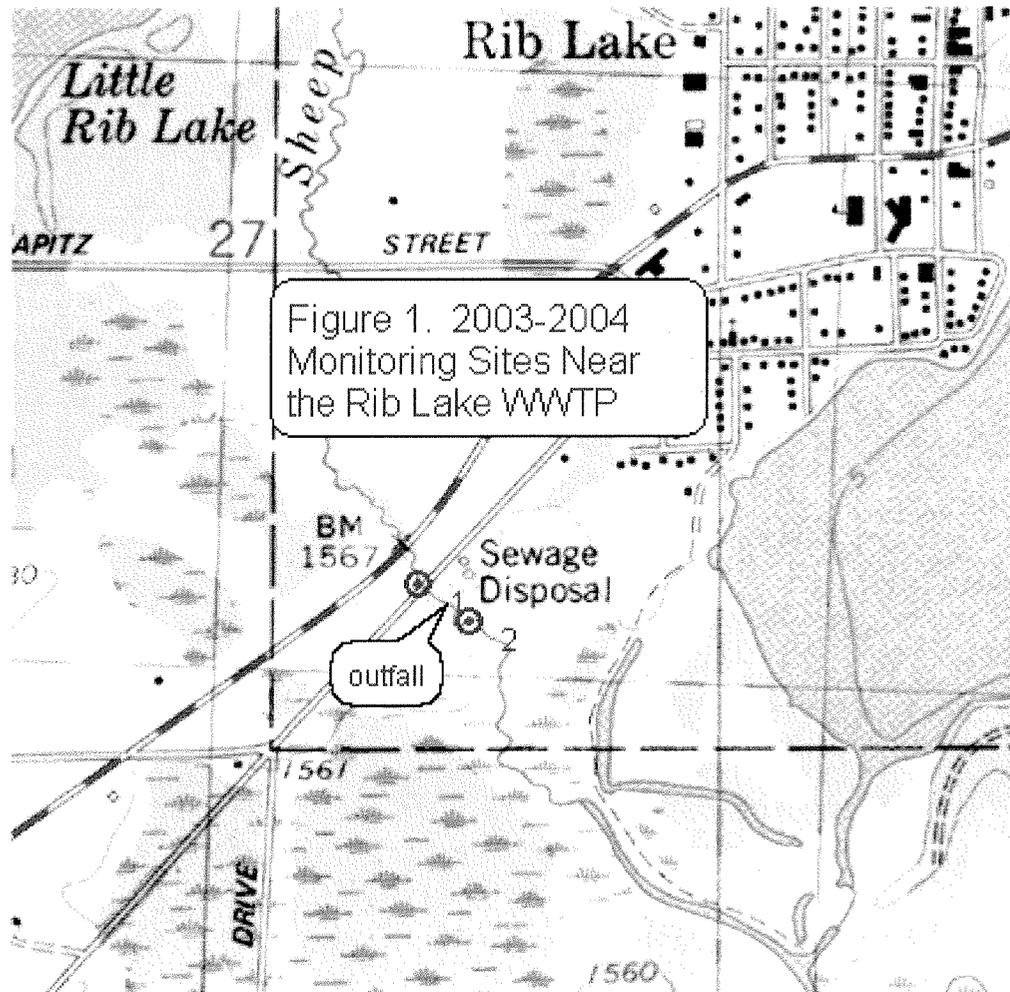
Species	Number
white sucker	19
yellow perch	16
black crappie	15
golden shiner	7
brassy minnow	4
fathead minnow	3
bluegill	2
pumpkinseed	2
bluegill x pumpkinseed	1
creek chub	1
black bullhead	1
central mudminnow	1

no. of species = 12

total no. of fish = 72

percent of non-game fish not tolerant to low D.O. = 67%

no. of game fish / 100meters = 29.5



Region NOR County Taylor Report Date 8/1975 Classification LFF
 Water Body: Sheep Ranch Creek
 Discharger: Rib Lake STP

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: photocopied photos

Historical Reports in file:

8/1975 -

Additional Comments/How to improve report:

- LFF class'n b/c of "natural warming of water"
 * - Report states the trout are present in stream segment
 → This report definitely needs ~~the~~ updated documentation, additional data, and justification of why this is considered LFF when trout are present.

RIB LAKE, TAYLOR COUNTY

Wastewater Receiving Stream Classification

The Village of Rib Lake operates an activated sludge secondary treatment plant for the processing of municipal wastewaters. The STP effluent enters Sheep Ranch Creek just downstream from State Road. Sheep Ranch Creek is classified as Class II trout waters from the headwaters down to S.T.H. 102 which is just upstream from State Road.

From the STP downstream Sheep Ranch Creek enters a wetlands area containing shrub marsh, wet meadow and tamarack bog vegetation types. The stream channel becomes wide with unstable marsh edges and the flow becomes very sluggish. Approximately 2,000 feet downstream from the Rib Lake STP Sheep Ranch Creek encounters an artificial dike constructed during the middle 1960's. The creek then runs alongside this dike in an artificial channel until emptying into the Rib River just below the dam structure regulating the discharge from Rib Lake. The purpose of the dike and dam structure was an attempt to regulate the discharge from Rib Lake through this wetland and to stabilize the water level in the lake.

A stream survey was conducted on the Upper Rib River and Sheep Ranch Creek in ^{August 12th} ~~July~~ of 1975. A portion of the report on this survey described the Lower Sheep Ranch Creek and Upper Rib River as a section, ".... characterized by an organic muck bottom and deep, stagnant water. A large portion of lower Sheep Ranch Creek and the upper Rib River have been channelized in the past and a dike along the waterway was formed with the dredge material. The bank vegetation was cattail marsh, tag alder or open sedge marsh. Instream vegetation was abundant with burreed, yellow pond lily, pondweed, nitella and duckweed.

The water was too deep to survey in this section of stream but the areas surveyed above and below indicated a severely reduced fish fauna near the edges of this section. Disturbance of bottom detritus released malodorous gases. These gases of decay or decomposition may be restricting the fish fauna in the summer and low winter oxygen levels undoubtedly occur."

This report described the section of stream by the Sewage Treatment Plant as; "This section graded from the habitat of area #4 to a deep, narrow gravel bottom stream with cool water. Bank vegetation is marsh sedge and tag alder with grass and weeds appearing at the upper end. Elodea, yellow pond lily, duckweed and burreed are common instream vegetation. Trout are present starting 75 yards below the sewage plant. Several nice trout were captured at the outfall pipe of the sewage plant."

1976
Also this summer attempts have been made to perform a waste load assimilation study on Sheep Ranch Creek below the Rib Lake STP. The findings of these investigations indicate the impact of the STP discharge is difficult to separate from the impact of the unusual habitat conditions.

It is the opinion of the investigating team that Sheep Ranch Creek, without the presence of the Rib Lake STP would undergo severe water quality degradation in this lower stretch of stream and not be able to maintain "fish and aquatic life" standards. The natural warming of the water in this wide slow moving segment is the primary reason for the change from trout to non-trout water status. The naturally occurring high-organic base soils in this wetland create a biological oxygen demand which could result in oxygen depletions under certain conditions. The release of any sludge forming solids from the STP would compound this problem.

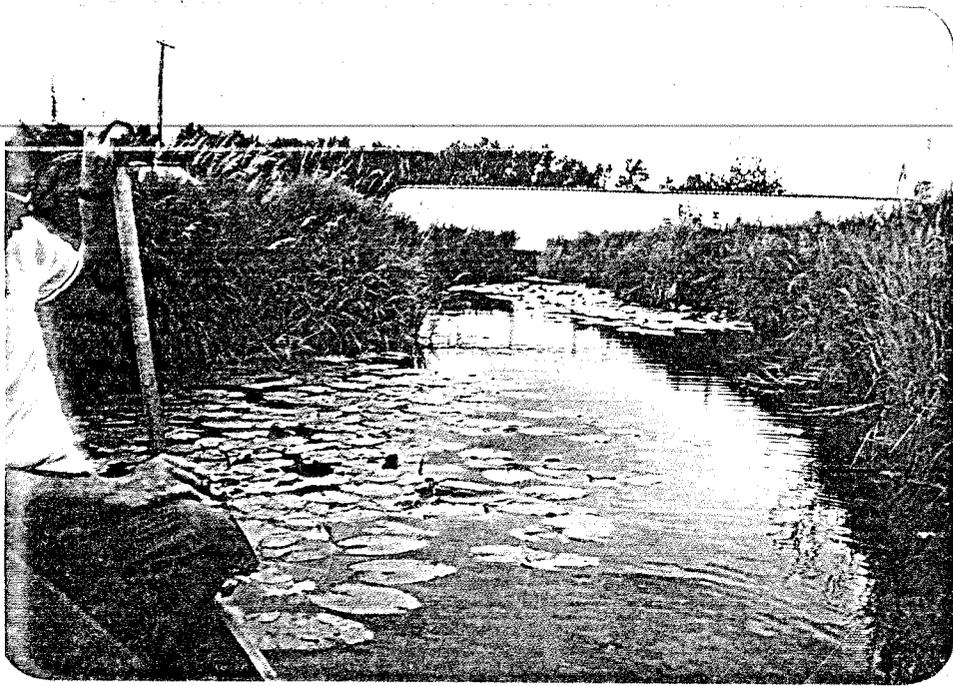
Recommendation:

Sheep Ranch Creek downstream from State Road shall be classified as a continuous stream with a sub-categorization of "intermediate aquatic life", down to the Rib River in the NW¹/₄, NW¹/₄ of Sec 35.

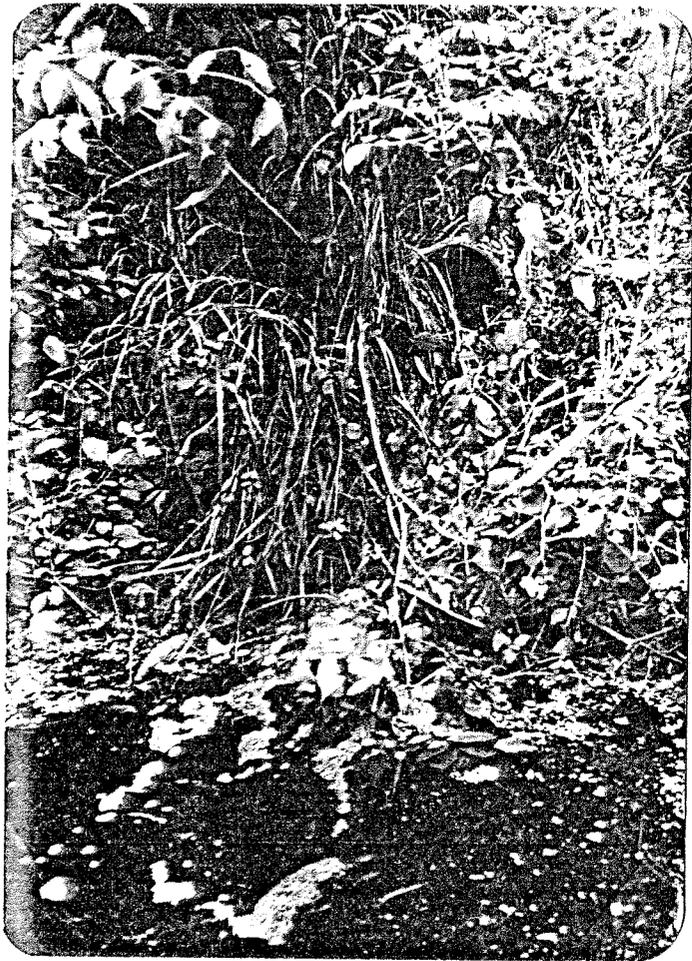
$$Q_{7,10} = 0.47 \text{ cfs for } 8 \text{ sq. miles}$$

Rib River shall be classified as continuous fish and aquatic life. (9/13/75 conversation with Ted Smith)

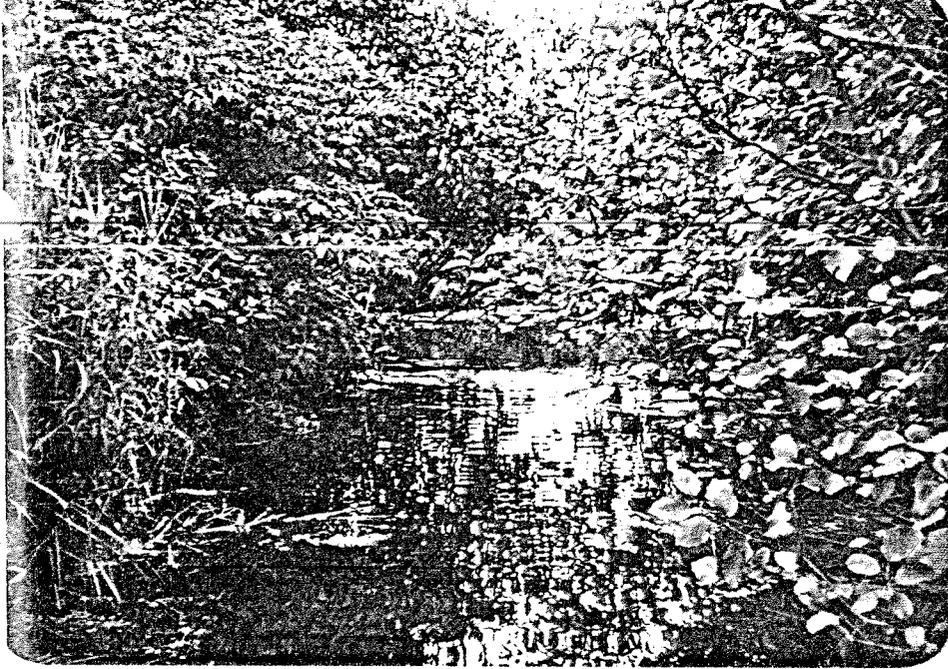
C
O
P
Y



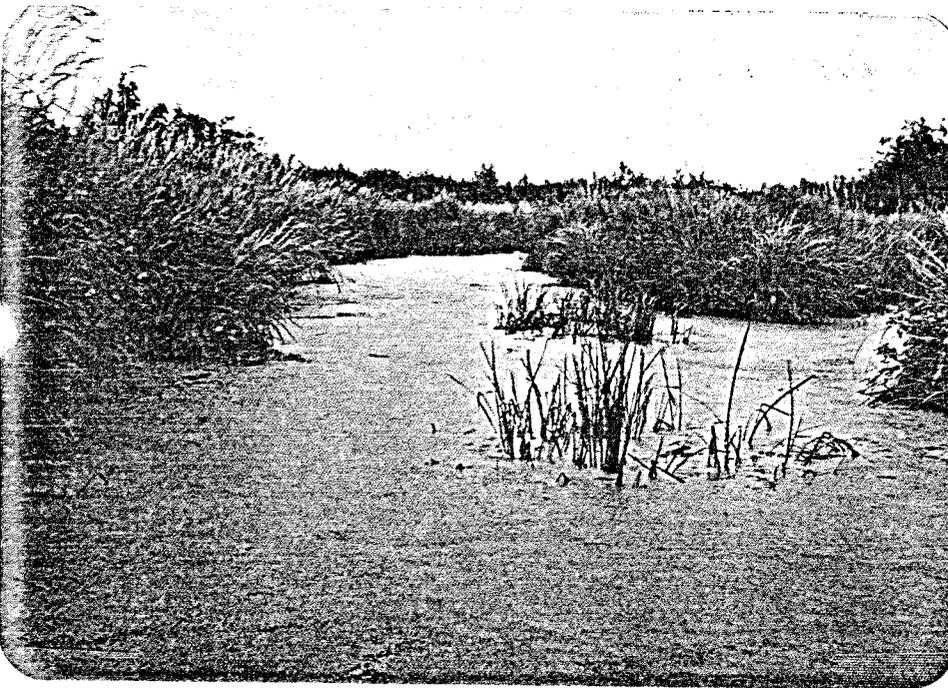
Sheepbranch Creek.
Just above Rib lake STP
State Rd (Old Hwy 102)
is in background



Rib lake STP outfall



Sheepranch Creek -
At Rib Lake STP
Out fall, looking down-
stream



Sheepranch Creek -
At halfway point
between STP + dike



Sheepranch Creek -
At junction with
dike.

1111
 6-2-44
 100-500
 504
 hand
 02

RIB LAKE

SPECIES OF FISH		
	Abundant	Common
		Rate
Muskie		
N. Pike		
Walleye		
L. M. Bass		X
S. M. Bass		
Panfish	X	
Trout		

AREA 319.55 ACRES
 UNDER 3 FT. 8.25 %
 OVER 20 FT. 0 %
 VOLUME 1977.27 ACRE FT.
 TOTAL ALK. 68 P.P.M.
 SHORELINE 3.33 MILES
 MAX. DEPTH 9 FEET

102

SEWAGE PLANT

Tamarack Bog

Alder

Sheep Ranch Creek

Roller Dam Head

Tamarack Bog

4.68 Acres

Spruce Bog

Alder

Tamarack Bog

DITCH

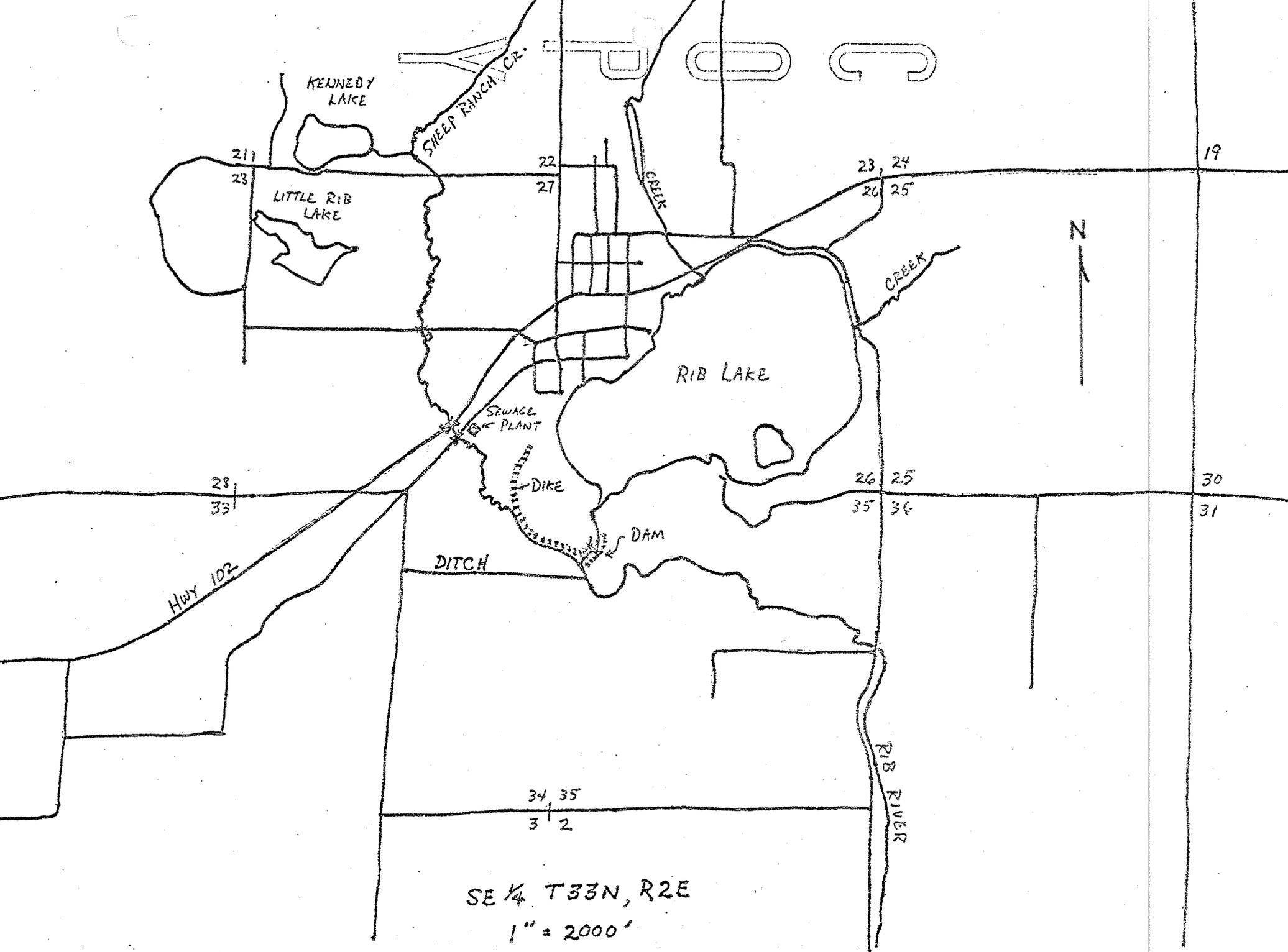
RIB RIVER

Cemetery

B.M.



◇ Access ◇ Access with Parking ◇ Boat Livery
 Field work by: G. Miller, M. Perkins, J. Sather. Drawn by: J. Roth



KENNEDY LAKE

SHEEP RANCH, CR.

211
23

LITTLE RIB LAKE

22
27

CR. CREEK

23, 24
26, 25

19



CR. CREEK

RIB LAKE

SEWAGE PLANT

DIKE

26, 25
35, 36

30
31

DAM

Hwy 102

DITCH

RIB RIVER

34, 35
3 | 2

SE 1/4 T33N, R2E

1" = 2000'