

Region NOR County Polk Report Date 8/1975 Classification LAL
 Water Body: North Star Creek, Trib to
 Discharger: Luck 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:

8/1975 - L. Seymour, T. Moe, et al.

Additional Comments/How to improve report:

- LAL by default b/c of effluent ditch class'n.

LUCK, POLK COUNTY

Wastewater Receiving Stream Classification

Treated sewage from the Luck WWTP is piped underground approximately one-quarter mile to the north where it discharges to a constructed ditch running parallel to a railroad grade and tracks. The ditch, possibly constructed for receiving the effluent, follows the railroad tracks for about one mile and is the initial headwater tributary of North Star Creek. There is no flow in the ditch above the WWTP effluent.

One-half mile to the north (downstream) the ditch flows through a culvert under the section 21/28, east-west town road. The ditch is almost completely hidden by tall grass. Flow status is similar to that of the discharge location.

The 1955, Frederick U.S.G.S. map shows North Star Creek as being a continuous flow stream beginning in the middle of section 21, one mile north (downstream) of the Luck sewage discharge or one-half mile north of the section 21/28 town road crossing.

The next downstream town road crossing at the section 16/21 section line, was inspected during the August 25, 1975 evaluation. The water was clear and cool, the flow was greater than at the upstream road crossing and the rock and gravel substrate was supporting an assemblage of invertebrates (TRICHOPTERA, EPHEMEROPTERA, and ELMIDAE larvae) indicative of a clean water environment. Aquatic life present at that location lends credence to the continuous flow map notation because continuous flow favors colonization by the organisms that were found. That area would also serve well as a spawning area for brook trout. Surface Waters of Polk County (WCD - 1961) states brook and brown trout to be present near the North Star Creek outlet to the Trade River which is two miles downstream from the section 16/21 town road.

[Missing
photos]

Luck ditch just below the WWTP
discharge looking downstream
off railroad tracks.

North Star Creek at section 16/21
town road crossing downstream view.

Recommendations:

The receiving stream for the Luck WWTP shall be classified as an effluent ditch from the point of discharge for the next one mile, to the middle of section 21.

North Star Creek from the middle of section 21, downstream to the Trade River shall be classified as a continuous flow, fish and aquatic life stream.

Evaluation Date: August 25, 1975

Personnel:

Lewis A. Seymour - Environmental Engineer - WCD
Terry A. Moe - Water Pollution Biologist - WCD
Bert J. Apelgren - Area Fish Manager - Menomonie Area
Ron Martin - Biologist - Water Quality Evaluation - Madison



LUCK DITCH



LUCK DITCH



AT TN. ROAD
CULVERT BEFORE
STH "35"
BELOW LUCK
WWTP



