STREAM CLASSIFICATION STUDY ON VAN DYNE CREEK
FOND DU LAC AND WINNEBAGO COUNTIES

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General Information

Drainage Basin: Upper Fox - III
Stream Length: 4.9 miles
Gradient: 12.2 feet per mile
Estimated $Q_{7},10$: < .1 cfs
Classification Upstream of Sec. 33: Int.-D
Classification Downstream of Sec. 33: FAL-B

Van Dyne Creek is a small tributary to Lake Winnebago. Most of the stream is intermittent and does not support a permanent sport fishery. Land use is primarily agricultural and parts of the stream have been ditched and straightened. The creek drains a large area for its size and stream flows fluctuate considerably before and after storm events. During periods of high flow, stream substrates become scoured. Below the intermittent zone, a slough is formed at the confluence with Lake Winnebago and extends approximately three-quarters of a mile upstream. The slough supports warm water sport fishes.

On November 13, 1984, Lake Michigan District WRM and wastewater staff (Tim Dolger, Tim Rasman, Jeff Haack, and Mike Russo) and Southern District WRM staff (Bob Last, and Dave Marshall) performed a joint stream classification study on Van Dyne Creek. Both districts were involved because the stream flows northeast from Fond du Lac County (S.D) into Winnebago County (L.M.D.). The study was initiated to assist the determination of appropriate effluent limits for a proposed discharge, based on the use classification. Both districts agreed that more fishery data was needed, as well as macroinvertebrate data and habitat evaluation.

Fishery and Macroinvertebrate Data

Prior to the classification study, the only recorded fishery data was collected by the old Conservation Department in 1964. At that time, perch and black bullheads were identified in the slough area above the mouth of Van Dyne Creek. There is no information on the numbers of each species. Upstream from the slough, a scanty population of minnow species were collected on November 13, 1984, in sections 5 and 32. One walleye was observed near the Lone Elm Road bridge in Section 33.

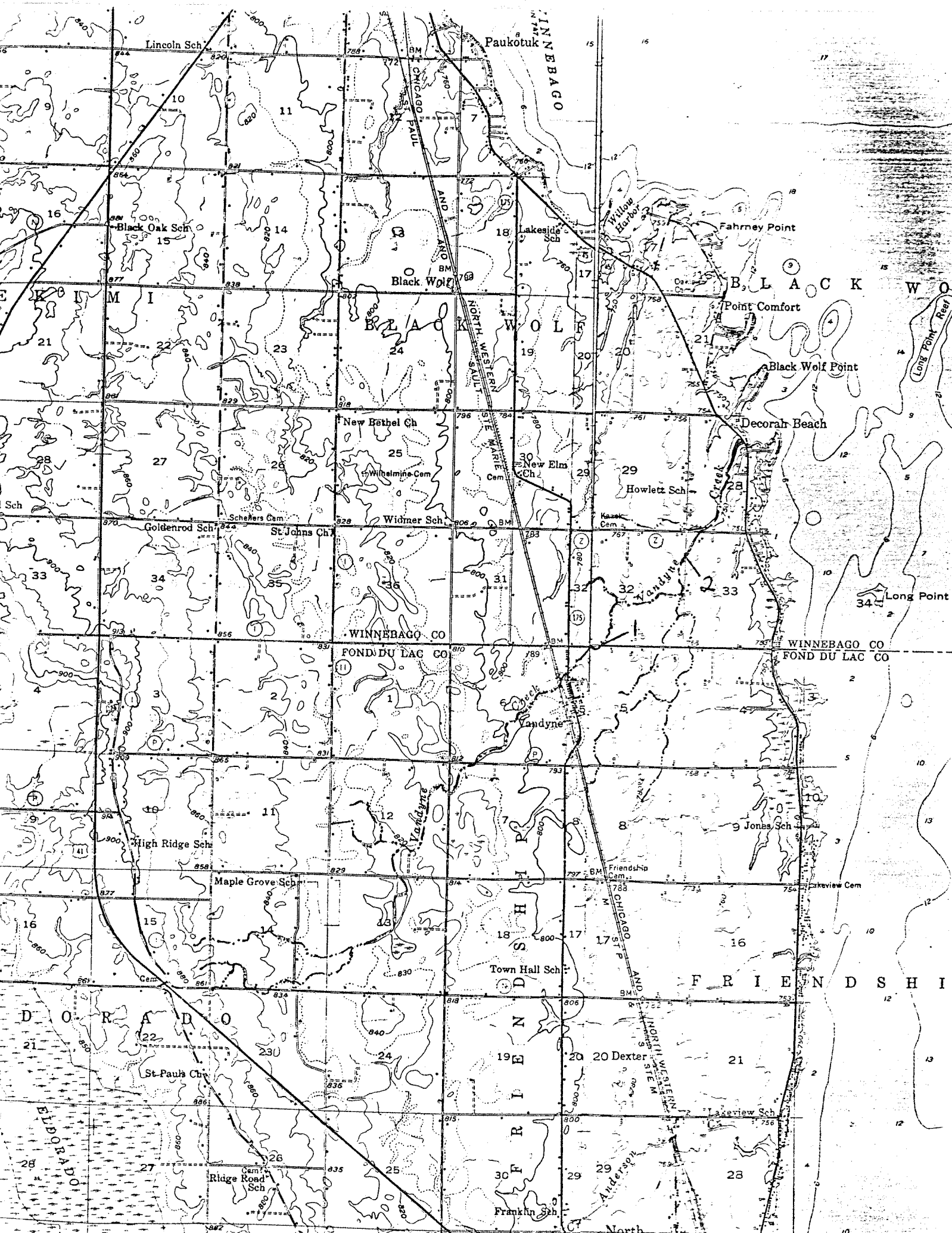
Macroinvertebrate samples collected at Van Dyne Road (Site 1) and Lone Elm road (Site 2) bridges had Biotic Index values of 4.99 and 4.96 respectively. These values reflect very poor water quality at both stations, or more accurately, the intermittent nature of Van Dyne Creek above the slough.

Habitat Evaluation

Using the Stream System Habitat Rating Form, Van Dyne Creek has a reach score of 227 (poor) from Van Dyne Road to Lone Elm Road. This rating reflected the intermittent nature of the stream coupled with cropland erosion and runoff.

Conclusions and Recommendations

Upstream from Lone Elm Road (Section 33), Van Dyne Creek is intermittent and does not support balanced fish and aquatic life communities. It is classified intermediate fish and aquatic life (Int-D). Below Lone Elm Road, the stream becomes a backwater of Lake Winnebago. In that reach, Van Dyne Creek supports a warm water sport fishery and is classified full fish and aquatic life (FAL-B).


Lincoln Sch
Paukotuk
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Willow Harbor
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Black Wolf
Point Comfort
Black Wolf Point
Long Point Reef
Decorah Beach
New Bethel Ch
Wilhelmine Cem
New Elm Ch
Howlett Sch
Goldenrod Sch
Schehers Cem
St Johns Ch
Widmer Sch
Kazek Cem
Vandyne
Long Point
WINNEBAGO CO
FOND DU LAC CO
Creek
Jones Sch
High Ridge Sch
Maple Grove Sch
Friendship Cem
Lakeview Cem
Town Hall Sch
Dexter
Lakeview Sch
St Paul's Ch
Ridge Road Sch
Franklin Sch
Anderson
North
CHICAGO ST P AND
NORTH WESTERN
STE MARIE
BLACK WOLF
FRIENDSHIP
ELDORADO

Macroinvertebrate Data

Site 1 - Van Dyne Road
10/31/84

	n	a	nxa
Amphipoda			
Hyalella azteca	1	4	4
Isopoda			
Asellus intermedius	99	5	495
Total	100		499

Biotic Index = 4.99 - Very Poor Water Quality

Site 2 - Lone Elm Road
10/31/84

Amphipoda			
Hyalella azteca	4	4	16
Amphipoda			
Asellus intermedius	89	5	445
Total	93		461

Biotic Index = 4.96 - Very Poor Water Quality

References

Ball, Joseph, 1981. Stream Classification Guidelines for Wisconsin. WDNR.

Fago, Donald M., 1981. Data collected from Southern District streams for the Fish Distribution Study. WI DNR, Fisheries Research Section.

Hilsenhoff, William A., 1982. Using a Biotic Index to Evaluate Water Quality in Streams. WNDR Technical Bulletin No. 132.