

Region NER County Oronto Report Date 10/1987 Classification LAL/LFF/FAL
 Water Body: Jones Creek
 Discharger: Lena 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:

10/1987 - Dennis Weisense
8/1975 - Dennis Weisense

Additional Comments/How to improve report:

- if looks like there is good data @ this site -- need clarification
from regional biologists re: why some segments receive LAL/LFF classin.

CORRESPONDENCE/MEMORANDUM

STATE OF WISCONSIN

Date: October 6, 1987

File Ref: 3200

To: Duane Schuettpelz - WR/2

OCT 8 1987

From: Dennis C. Weisensel

Dennis

Subject: Triennial Standards Review For Jones Creek, A Tributary To The Little River, Oconto County Near Lena

Attached you will find documentation and request to change the Classification of Jones Creek, a tributary to the Little River in Oconto County. I am requesting that the classification be changed to reflect the recommendations of Greg Sevener's report. Jones Creek classification to should be changes to the following: from State Highway 141 downstream to a point 1/2 mile downstream of Belgium Road in the NW1/4 of the NE1/4 of Section 25, T29N, R20E, be classified as **Noncontinuous Intermediate Aquatic Life**; and downstream from that location on Jones Creek to the confluence with the Little River be classified as **Continuous Full Fish & Aquatic Life**.

Please incorporate the request into revisions in NR104 and any WPDES permit limits reissued when appropriate.

The attached report is part of the FY87 Triennial Standards Review & Stream Classification project.

cc: Joe Ball - WR/2
Linda Vogen
Greg Sevener
Bob Behrens

CORRESPONDENCE/MEMORANDUM

STATE OF WISCONSIN

Date: October 2, 1987

File Ref: 3200

To: Dennis Weisensel, LMD

From: Greg Sevener, Marinette G.A.S.

Subject: REVIEW OF STREAM CLASSIFICATION FOR JONES CREEK,
TRIBUTARY TO LITTLE RIVER, OCONTO COUNTY NEAR LENA

A review has been done of the former stream classification variance found in N.R.104.07(2) dated November, 1979. The current variance classification states Jones Creek must meet noncontinuous marginal surface water criteria from its headwaters downstream to CTHJ and continuous intermediate surface water criteria from CTHJ downstream to the confluence with Little River.

I am proposing a partial change in the present classification based upon data gathered during a post-operational survey done in 1983, oxygen data gathered in August, 1987 and fishery information gathered in 1982 and 1983.

I propose Jones Creek from the headwaters to State Highway 141 should remain classified as noncontinuous marginal surface water quality since it would not naturally meet any higher classification much of the time. I propose the segment from State Highway 141 to approximately 1/2 of a mile downstream from Belgium Road in the NW 1/4 NE 1/4, Section 25, Town 29 north, Range 20 east, be classified as noncontinuous intermediate aquatic life due to the progressive improvement in water quality. Downstream from this section, there is an increase in flows and depth in the stream, along with the potential for upstream migration of warmwater game fish. Fish management also found, possible small mouth spawning areas closer to the confluence with the Little River. Since there is a hydrologic change at this point, and a progressive improvement of fish habitat as one approaches the confluence with the Little River, I recommend the remainder of Jones Creek to be classified as continuous fish and aquatic life. Specifically, the section I propose to be classified continuous full fish and aquatic life, would be from approximately 1/2 mile downstream of Belgium Road in the NW 1/4 NE 1/4, Section 25, Town 29 north, Range 20 east to the confluence with the Little River.

Temperature and Dissolved Oxygen Data Collected in Jones Creek, tributary to Little River in Oconto County on August 20, 1987:

<u>SAMPLING SITE</u>	<u>TIME</u>	<u>WATER TEMP (°C)</u>	<u>DISSOLVED OXYGEN (MG/L)</u>
Road to Frigo W.W.T.P. upstream of Lena W.W.T.P. Outfall Note: There was no flow at this point through Palmer Bowlus Flume Culvert	1415	20.5	1.2
State Highway 141 (Flow < 1cfs)	1430	21.0	2.3
Belgium Road (Flow < 1cfs)	1445	17.5	4.5
County Highway J Note: More flow than Belgium Road	1500	16.0	5.1

Talking with a local person, he said there was a beaver dam somewhere downstream of this road crossing.

GS/bm

V. Presentation of Data - Table 1

Water Quality Data

Sampling Site	<u>L01</u> *1		<u>L02</u> *2		<u>L12</u> *3	<u>L03</u> *4		<u>L04</u> *5		<u>L13</u> *6		<u>LMI</u> *7
Sample Date - 1983	8/25	11/15	8/25	11/15	8/25	8/25	11/15	8/25	11/15	8/25	9/7	8/25
Flow (CFS)	0.01		0.23		N/A	0.27		0.26		N/A		.110 mgd
Dissolved Oxygen (mg/l)	2.6	7.4	0.8	6.7	1.4	4.3	7.5	6.6	8.9	4.0		4.1
Temperature (°C)	20.0	4.0	20.0	6.0	20.0	21.0	5.0	18.5	5.0	22.0		18.5
BOD ₅ (mg/l)	7.8		2.9		3.3	4.9		2.8		61.0	4.0	8.6
pH S.U. (Field)	7.3		7.3		7.4	7.4		7.7		7.9		7.4
pH S.U. (Lab)	7.5		7.6		7.5	7.8		8.0		7.6	9.0	7.7
Residue Tot NFLT (mg/l)	4.0		3.0		2.0	2.0		6.0		61.0	4.0	6.0
Phosphorus-Total (mg/l)	0.24		1.33		1.51	1.48		1.15		9.4		2.4
Phosphorus-Dis ORTHO (mg/l)	0.198		1.28		1.40	1.43		1.07		N/A		2.3
Tot Kjeldahl N (mg/l)	2.0		3.90		3.90	3.70		1.20		14.0		6.6
NH ₃ -N (Dissolved) (mg/l)	0.72		2.90		2.90	2.60		0.03		0.03	0.1	5.5
NO ₂ -NO ₃ -N (Dissolved) (mg/l)	0.65		2.40		2.2	2.30		3.1		0.4	10.6	2.4
Chloride (mg/l)	48.0		160		230	360		250		5400		240
Fecal Coliform count/100 ml	1300		160		3100	2700		420		1,000,000 (Estimate)	2000	--
Replicate	1	2	2	N/A								
Hilsenhoff Biotic	3.87	3.42	3.81	4.58	N/A	3.08		4.75		N/A		N/A

*1 Jones Cr. 30 ft. down from Maple St. in Lena

*2 Jones Cr. at RR Bridge below Lena STP *3 Jones Cr. at culverts 120 ft below RR Bridge

*4 Jones Cr. at STH 141

*5 Jones Cr. at Belgium Road

*6 Unpermitted Frigo Cheese Outfall

*7 Lena S.T.P. Outfall

CORRESPONDENCE/MEMORANDUM

ate: March 19, 1984

File Ref: 3600

o: Greg Sevener

rom: Greg W. Kornely

ubject: Partial fishery investigation on Jones Creek, Oconto County.

This survey was conducted on November 15, 1983, to contribute fishery data on this Water Quality Study Area. No previous fishery investigations have been conducted on the upper reaches of Jones Creek. The three stations surveyed correspond to areas being studied by Water Quality.

Jones Creek is a tributary stream to the Little River in Oconto County. The headwaters of Jones Creek lie southwest of the Village of Lena, through which the creek flows, and on, in an easterly direction. It enters the Little River in S.32-T.29N-R.21E.

Station 1 is approximately one mile downstream from the Village of Lena. Here the stream flows between cultivated fields, although bank vegetation buffers both sides of the stream. The only fish species captured were brook sticklebacks and white suckers. A survey conducted in the summer of 1982 at this station site found the same fish species.

Station 2 was upstream from the Highway 141 road crossing, immediately adjoining the Frigo Cheese Plant and downstream from the Lena Wastewater Treatment Plant. The only fish species captured in this area were brook sticklebacks, white suckers, and one mudminnow. The stream was heavily silted, however, and was impossible to walk up. Shocking efficiency was very poor. Immediately adjoining the stream at this station, recent ground leveling and filling work associated with the Frigo Cheese Plant may have added to the siltation problem.

Station 3 was upstream from the Lena Wastewater Treatment Plant. A low volume of water was present in this section of stream. Fish species captured included brook sticklebacks and white suckers.

In general, the fishery potential in the area of the recent survey is limited, primarily because of the low volume of water in the upper reaches of Jones Creek. The Lena Wastewater Treatment Plant is a major contributor of water in this area. Forage fish species were present at all survey sites.

A buffer zone of vegetation should be maintained between the Frigo Cheese Plant and Jones Creek to lessen the amount of siltation in this area.

The 1982 stream survey on Jones Creek included some areas downstream from the present survey. In areas of the creek closer to the junction with the Little River, a more varied species composition of fish was captured, including smallmouth bass. Good habitat for smallmouth bass spawning was present along with some evidence of natural reproduction.

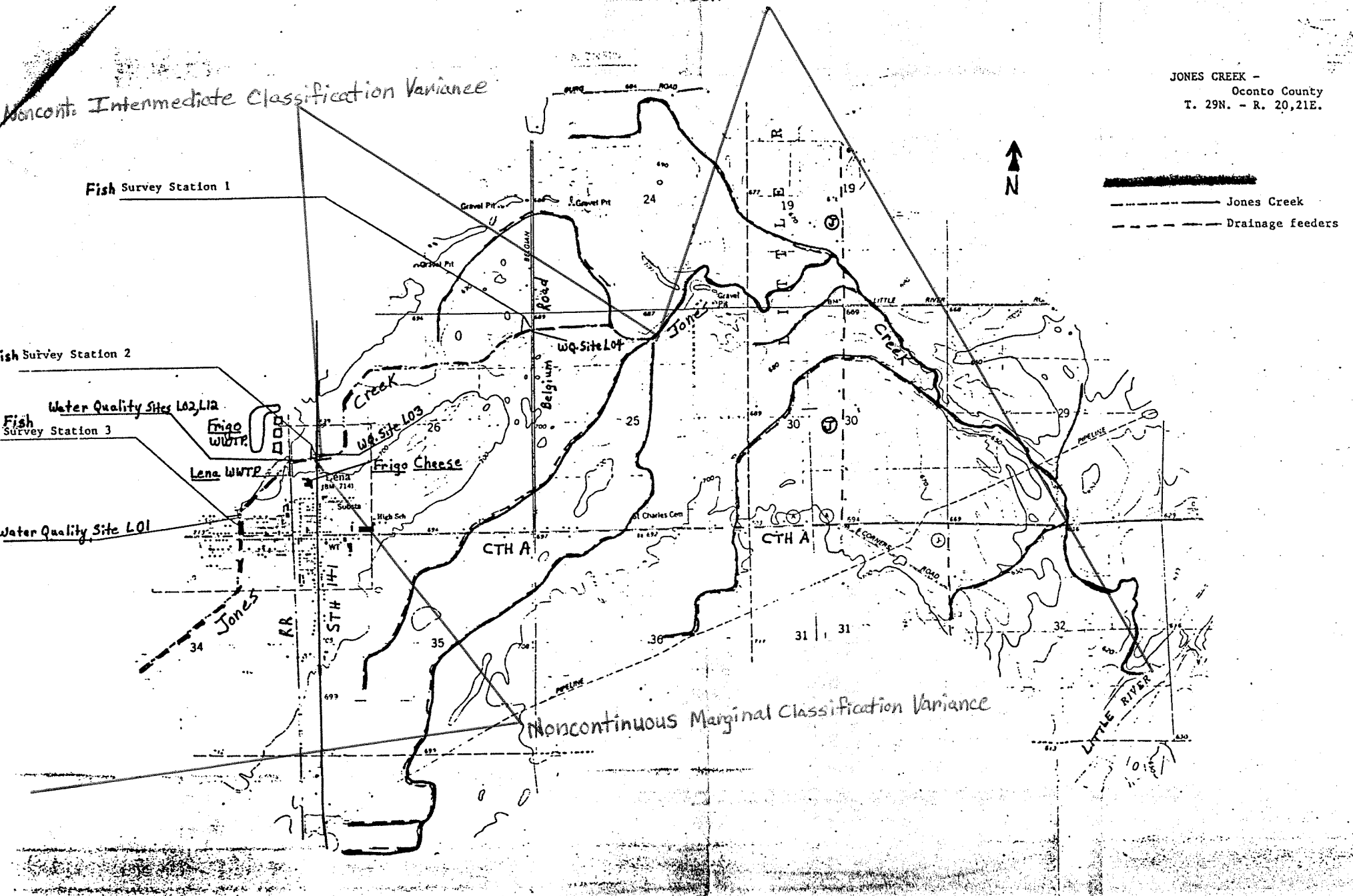
Jones Creek will support a limited smallmouth bass fishery in its lower reaches. The water quality present in the upper reaches of the stream could ultimately have an impact on this fishery.

GWK:lep

Noncont. Intermediate Classification Variance

Continuous Full Fish and Aquatic Life

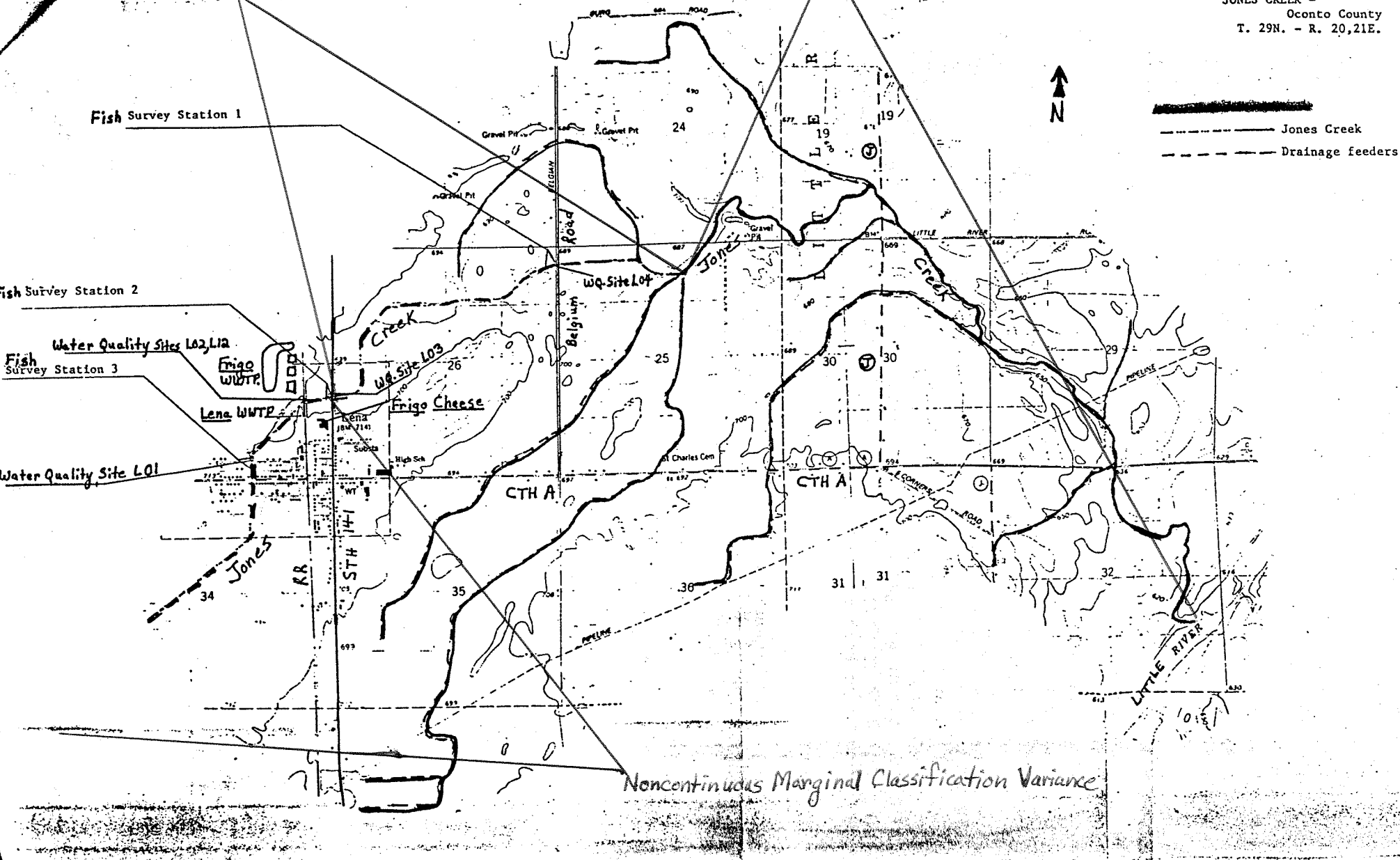
JONES CREEK -
Oconto County
T. 29N. - R. 20, 21E.



Noncontinuous Intermediate Classification Variance

Continuous Full Fish and Aquatic Life

JONES CREEK -
Oconto County
T. 29N. - R. 20, 21E.



LENA - OCONTO COUNTY

August 12, 1975

Wastewater Receiving Stream Classification

The Lena sewage treatment plant discharges its effluent to Jones Creek, which originates 1.5 miles to the southwest of Lena in a swampy area and flows six miles to the Little River. It has a 7^{Q10} of 0.0 cfs. The Frigo Cheese Corporation discharges cooling water into Jones Creek some 1/6 mile below the STP. Much of the drainage way was man made and/or reconstructed at some time in the past. It passes through land used for agricultural purposes.

No flow with heavy vegetation was observed above the STP. A contribution of 60,000 GPD comes from the municipal STP with 100,000 GPD of cooling water from the Frigo Company. Below the STP the vegetation includes cattails, smartweed, and Sagittaria species. A bottom sludge buildup which lingered to County Trunk "J" was evident. Benthic organisms above CT "J" included Simuliidae with some midges while below included snails, sowbugs, and midges. The stream became more meandering and duck weed covered at this point.

Recommendation:

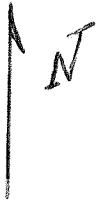
The stream was determined to be noncontinuous with agricultural use above the tributary at CT "J". Below this point the stream becomes continuous and acceptable for intermediate aquatic life standards.

DAF

DAF:ct
9/10/75

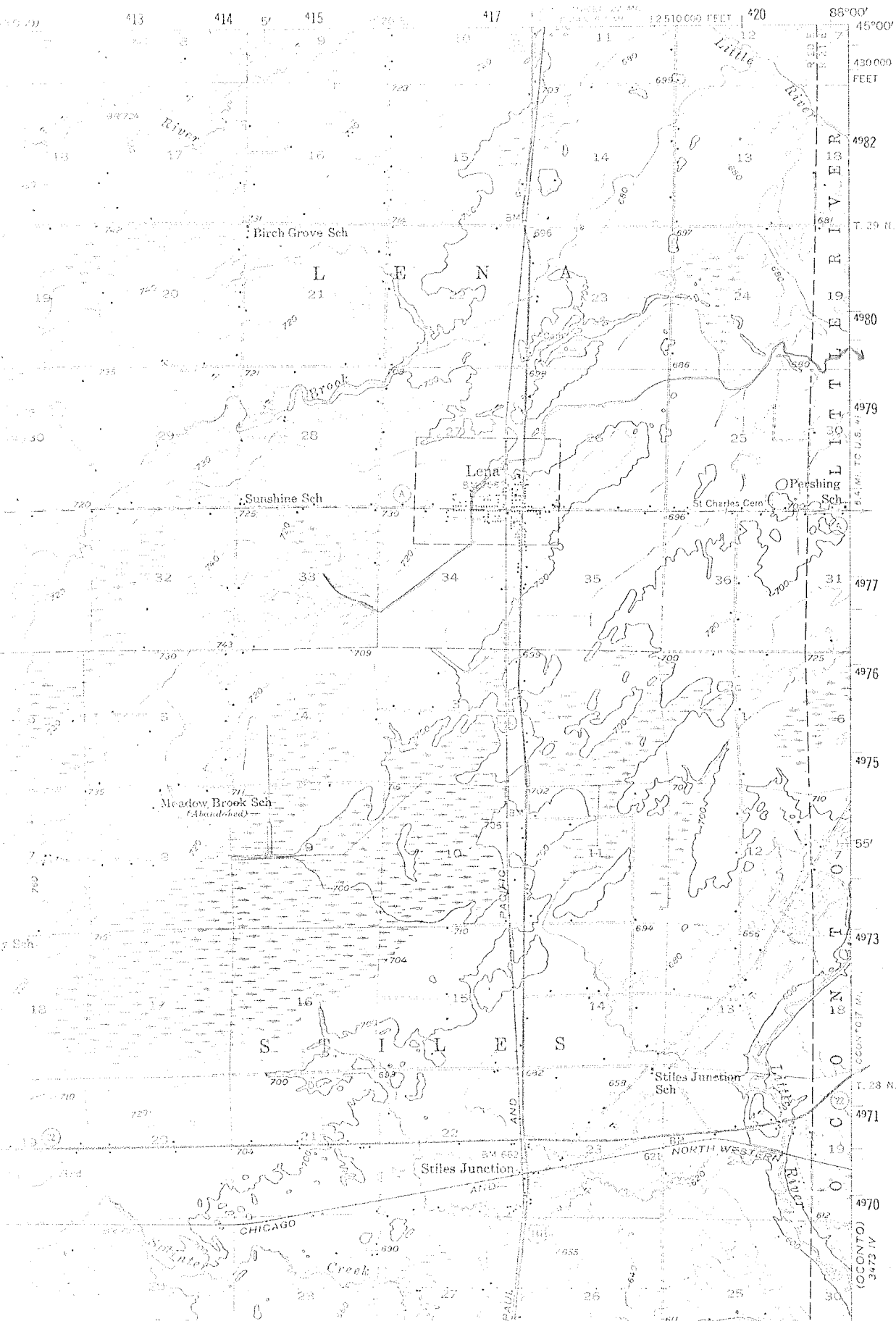
Dennis C. Weisner

LENA-JONES CREEK
Stream Classification



OCONTO FALLS QUADRANGLE
WISCONSIN
15 MINUTE SERIES (TOPOGRAPHIC)

34.74 IN
(PORTERFIELD)



JONES Creek - 8-12-75



600' below STP - WIDTH = 5', Depth = $\frac{1}{2}$ '



1 mile below STP - MUCH vegetation



CT 'J' - WIDTH = 8', Depth = $\frac{1}{3}$ '



CT 'A' - WIDTH = 10', Depth = $\frac{1}{2}$ '