

## **PRAIRIEVILLE CREEK**

*Barry County (T1N, R10W, Sections 25 and 36)  
Surveyed August 17, 1989*

**James L. Dexter, Jr.**

### **Environment**

Prairieville Creek is a small first order trout stream that is classified as second quality coldwater. Located at the southern end of Barry County, the creek originates as large springs. Flowing south through a small impoundment (Mud Lake), Prairieville Creek empties into the north end of Gull Lake. The town of Richland is located about 5 miles to the south.

The watershed is characterized by marsh and wooded wetland. Some active farm fields are also located nearby. The terrain is gently rolling hills. The subsoils are made up of poorly drained Houghton muck in the upper mile of creek, and well-drained Oshtemo sandy loams in the lower mile. Prairieville Creek, although small, is the major feeder stream to Gull Lake.

Stream width averages 15 feet, and depth averages 4 inches. Water velocities are moderate. The creek is about 2.0 miles in length.

The water quality appears excellent, but no chemical analyses have been conducted. The water is extremely clear year-round. The bottom types are rock and gravel (50-70%) and sand with marl (30-50%). Pools and riffles are common. Cover types include logs, undercut banks, and overhanging brush. An excellent mosaic of these cover types is available throughout the system. The headwaters are characterized more by overhanging vegetation and watercress with greater depths compared to those areas below Mud Lake. Below Mud Lake the creek is 80-100% shaded. The surrounding canopy of brush is extremely dense.

Development is very limited along the creek. Access can be obtained at road crossings, although it is not known if landowners are allowing access. It appears as if little fishing pressure occurs on the creek.

### **Fishery Resource**

This report documents the first study of this water by the Fisheries Division on August 17, 1989. Backpack electroshocking (240V pulse DC) was conducted at two sites for a total of 1,436 feet. The objective of the collection was to determine if landlocked Atlantic salmon had successfully reproduced during the fall of 1988. At that time, a number of Atlantic salmon had passed above the weir set up to collect adults for spawn taking. This occurred in early November during a very heavy rain.

A diverse fish community was found in Prairieville Creek (Table 1). A total of four young-of-the-year (YOY) Atlantic salmon were captured about 1 mile upstream from Gull lake. All four YOY were associated with woody debris, but not pools or undercut banks. Final identification of these fish were made by Dr. Gerald Smith of The University of Michigan. The characteristics and

appearance of young Atlantic salmon are extremely similar to brown trout, and we could not positively tell the difference in the field. It was suspected that these four were Atlantic salmon, however, because the pectoral fins seemed large.

Brown trout were also found, even though the only stocking record is of 54,000 spring fingerlings in 1966. All other salmonids species have been introduced to Gull Lake. Browns, rainbows, Atlantic salmon, and smelt (when present) all reproduce with some success in the creek. However, the contribution of naturally produced salmonids to fishing is most likely minimal because of the small size of the creek. All salmonids handled during this survey were in exceptionally good condition.

### **Management Direction**

Prairieville Creek will continue to serve as an important spawning area for brown and rainbow trout. Landlocked Atlantic salmon, and smelt if present, will also utilize the creek.

At this time, nothing can be done to improve habitat except, perhaps, to increase water depth. The watershed is safe from environmental catastrophes because much of it is wetland.

Brown and rainbow trout should continue to be available to anglers into the future. The best management direction at this time is no management other than to continue the current fishing regulations. We will continue to monitor the creek for spawning Atlantic salmon in November and smelt runs in April.

Report completed: March 1990.

**Table 1.**-Species, relative abundance, and length range of fish sampled by backpack electroshocking in Prairieville Creek, August 17, 1989.

<u>Species</u>	<u>Number</u>	<u>Percent</u>	<u>Length range</u> <u>(inches)<sup>1</sup></u>
Blacknose dace	138	54.8	1-4
Creek chub	29	11.5	1-6
Rock bass	24	9.5	2-5
Hornyhead chub	12	4.8	2-5
Rainbow trout	10	4.0	3-8
Johnny darter	8	3.2	1-3
Atlantic salmon	5	2.0	2-9
Log perch	5	2.0	2-3
Rainbow darter	5	2.0	2
Blackside darter	3	1.2	2-3
Brown trout	3	1.2	8-9
Longnose dace	3	1.2	3
Green sunfish	3	1.2	2-3
Central mudminnow	3	1.2	2
White sucker	1	0.4	2
Total	252	100.0	

<sup>1</sup>Fish were measured to inch group: e.g., "1" = 1.0 to 1.9 inches; "2" = 2.0 to 2.9 inches; etc.

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**Last Update:** 08/06/02

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**Questions, comments and suggestions are always welcome! Send them to**  
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