

2004 Baseline Survey of Sawmill Creek

Lower East Pecatonica Watershed (SP03), Sugar/Pecatonica Basin

Green County

WBIC 906000

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Jim Amrhein, Watershed Specialist
South Central Region

Sawmill Creek originates in northwest Green County and flows 12 miles toward the southwest where it enters the East Branch Pecatonica River in northeastern Lafayette County. The lower 8.7 miles is designated as a Class II trout stream. The stream's habitat is impacted by nonpoint source pollution.

On August 27th and August 30th a survey was conducted on 3 sections of Sawmill Creek: Upstream from State Highway 78 in Lafayette County; upstream from Sawmill Road and upstream from Sunnyside Road, both in Green County. Fish were collected at all sites using a 240 volt D.C. stream shocker with 2 probes. In addition, a habitat and macroinvertebrate evaluation were conducted on the site at Sawmill Road, but these results are not available at this time.

Upstream State Highway 78

This site is about a mile upstream from the confluence with the East Branch Pecatonica River. As such, it is wide and contains fish that migrate up from river. The water temperature was 62°F. The stream averages about 6 meters wide. The depth varies from 0.3 – 1 meter in runs and 1- 1.5 meters in pools. There were no riffles in this stretch. The stream flows through pastureland, but the streambank is fairly well vegetated with the exception of outside bends. Stream banks vary from 1 – 1.5 meters. The bottom is mostly sand with some areas of silt and clay. The stream meanders well and there is a large amount of woody debris and log jams which create holes of 1 – 1.5 meters deep.

A 193 meter segment of stream was shocked. The following non-game species were collected:

Species	Number
White Sucker	56
Shorthead Redhorse	5
Creek Chub	10
Bluntnose Minnow	8
Common Shiner	13
Fantail Darter	10
Fathead Minnow	1
Blackside Darter	2
Johnny Darter	2
Stonecat	1

In addition, the following trout were collected:

Species	Size (in)	Species	Size (in)
Brown Trout	16.4	Brown Trout	10.2
Brown Trout	12.4	Brown Trout	10.4
Brown Trout	14.1	Brown Trout	11.2
Brown Trout	10.3	Brown Trout	10.2
Brown Trout	13.9	Rainbow Trout	12.8

The warmwater IBI for this site is 27 (poor). The coldwater IBI is 0 (very poor).

Upstream from Sawmill Road

This stretch of stream has had some management work done with rip-rap placed along the edge of the stream for the first 60-70 meters upstream from the bridge. The stream averages 4.6 meters wide and about 0.3 meters deep. It is mostly a long run with a few scattered riffles. Flow was measured at 7.02 ft³/second (0.199 m³/second). The water temperature was 62°F. The stream flowed through a residential yard and then agricultural fields, but there is a pretty substantial buffer. Still, the banks range in height from 0 to 1.25 meters and are raw. The stream bottom varied from silt and rock in the first 60 meters where the rip-rap was placed, to silt, and then gravel in the riffle areas. Woody debris provided fish holding habitat in the area upstream from the rip-rap, but not enough to hold great numbers of fish.

A 203 meter segment of stream was shocked and the following non-game species were collected:

Species	Number
Common Shiner	13
Creek Chub	22
White Sucker	45
Southern Redbelly Dace	5
Green Sunfish	1
Fantail Darter	25
Johnny Darter	10

In addition, 15 brown trout between 4.0 and 13.4 inches were collected (See Figure 1). The coldwater IBI for this site was 0 (very poor). The warm-water IBI was 34 (fair).

Upstream from Sunnyside Road

This section of stream runs through a pasture. A great deal of rip-rap has been placed on the outside bends of the stream in this pasture. Additionally, this farm has implemented other best management practices on the land in order to reduce runoff. The water temperature was 62°F. The stream averages 4 meters wide and has an average depth of 0.5 meters. There are numerous meanders in the stream. The bank height varied from 0 – 1 meter. Most were stabilized with rip-rap but there was some slumping of banks, but they were still vegetated. The stream bottom is mostly sand with some gravel in riffle areas. Sago pondweed, coontail, and elodea were found in soft sediment areas. The depth, riprap, and macrophytes provided a great deal of cover for fish. A 296 meter segment of stream was shocked. The following non-game species were collected:

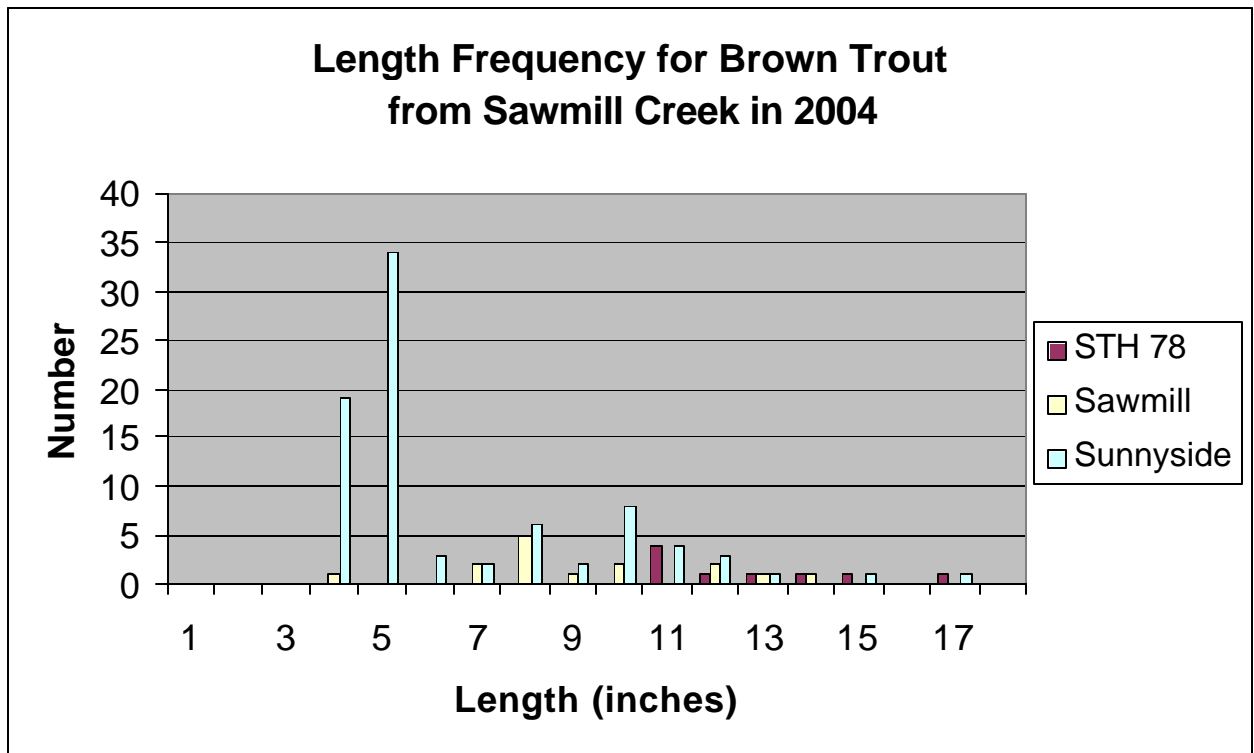
Species	Number
Common Shiner	28
White Sucker	27
Brook Stickleback	35
Southern Redbelly Dace	17
Creek Chub	33
Fantail Darter	84
Green Sunfish	8
Johnny Darter	38
Fathead Minnow	1

In addition, 4 young-of-the-year largemouth bass (1.8-2.2") were collected. Eighty-five brown trout were collected that ranged in size from 3.4 to 16.8 inches (Figure 1). The coldwater IBI for this site is 20 (poor). The warmwater IBI is 39 (fair).

Summary

Sawmill Creek is a Class II trout stream for the lower 8.7 miles. While there are no other coldwater indicator species in the stream, the stocked brown trout show signs of carryover as evidenced by the presence of multiple year classes in different segments of the stream.

Figure 1: Length Frequency Histogram for Brown Trout in Sawmill Creek - 2004



The number of trout per mile varied between sites. Sunnyside Road had 462 trout/mile while Sawmill Road and STH 78 had 119 and 75, respectively.

In March 2004, 900 yearling brown trout were stocked at 4 locations on Sawmill Creek. The fact that 3-5" fish showed up in the survey at Sunnyside Road is evidence that there is either natural reproduction occurring or small fingerlings stocked from elsewhere, perhaps Erickson Creek, migrated to this site.

Management Recommendations:

Employ agricultural best management practices in the watershed to mitigate nonpoint source pollution.

In addition to rip-rap, fence stream upstream from Sunnyside Road and place several crossings in pasture.

Deploy temperature monitors to determine the thermal regime of this stream.

Assess the upper 4 miles of stream to determine status.