

2004 Baseline Survey of **Skinner Creek**

Jordan and Skinner Creeks Watershed (SP02), Sugar/Pecatonica Basin

Green County

WBIC 894500

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South Central Region

Originating at the confluence of Bushnell and Buckskin School Creeks, this large stream flows southwesterly and joins the Pecatonica River near Browntown. The creek has an abundance of forage fish but also contains some sport fish. Species such as smallmouth bass, northern pike and channel catfish are more prevalent in periods of high water. It suffers from habitat impairment caused by sedimentation from nonpoint source pollution.

On August 30th and 31st a survey was conducted on 3 sections of Skinner Creek: Upstream from Klondike Road; upstream from Hiawatha Road, and upstream from Skinner Hollow Road. Fish were collected from all sites using a 240 volt stream shocker with 2 probes. In addition, habitat and macroinvertebrate evaluations were conducted at the Klondike Road site, but the results are not available at this time.

Klondike Road

This section of stream is wide (7.12 meters) and deep (average depth about 0.5 meters). The water temperature was 58°F and the flow was 30 ft³/second (0.85 m³/second). It runs through a wooded corridor surrounded by agriculture with row crops and dairy farming. There was a 6 to 10 meter buffer on both sides of the creek. Banks varied in height, and there were many raw spots. The bottom was mostly clay, with a few gravel stretches and gravel, rubble/cobble riffles. There were many woody snags present in this section of stream.

A 340 meter section of stream was shocked. The following non-game species were collected:

Species	Number
Bluntnose Minnow	6
Fathead Minnow	6
Central Stoneroller	18
Creek Chub	19
White Sucker	140
Southern Redbelly Dace	45
Common Shiner	52
Brassy Minnow	48
Hornyhead Chub	25
Rosyface Shiner	3
Johnny Darter	1
Fantail Darter	16
Green Sunfish	4
Suckermouth Minnow	3
Central Mudminnow	1
Blackside Darter	1

In addition to these species, 9 bluegill between 5.2 and 6.6 inches were collected. Two brown trout, 10.7 and 11.9 inches, were collected as well. The warmwater Index of Biotic Integrity (IBI) was 35 (fair).

Hiawatha Road

This section of stream is fairly wide (approximately 6 meters) with an average depth of about 0.5 meters. The first 80-90 meters upstream from the bridge are channelized. This section flows entirely through pasture with very little buffer (2-3 meters). The stream banks are 0.5-1 meter high with some grasses, but lots of trampled banks due to grazing. The stream bed was u-shaped with very little cover for fish. The bottom was mostly clay with some areas of silt. The water temperature was 58°F.

A 151 meter stretch of stream was shocked. The following non-game species were collected:

Species	Number
White Sucker	87
Creek Chub	9
Common Shiner	75
Green Sunfish	1
Mottled Sculpin	75
Fantail Darter	19
Johnny Darter	7
Brook Stickleback	3
Brassy Minnow	2
Fathead Minnow	1
Central Stoneroller	1

In addition, a single brown trout that measured 13.7 inches was collected.

The warmwater IBI was 26 (poor). Because of the number of mottled sculpins found, a coldwater IBI was also calculated. The coldwater IBI was 10 (poor).

Skinner Hollow Road

This section of Skinner Creek averaged 7 meters wide and 0.6 meters deep. It flows through an agricultural area on the left upstream side in row crops with very little buffer. The right upstream side is steep and wooded with some nice areas of exposed bedrock. Stream bank height varied between 1 – 2.5 meters with many raw areas. The bottom was mostly clay with some small bedrock areas. The stream was fairly deep, but u-shaped, with few snags or other fish holding habitat. The water temperature was 58°F.

A 210 meter stretch of stream was shocked. The following non-game species were collected:

Species	Number
White Sucker	54
Mottled Sculpin	40
Common Shiner	8
Creek Chub	8
Fantail Darter	18
Green Sunfish	3
Bluntnose Minnow	1
Central Mudminnow	1
Johnny Darter	8
Brook Stickleback	1
Southern Redbelly Dace	5

A single rainbow trout, 14.0 inches, was also collected.

The warmwater IBI was 29 (poor). Because of the number of mottled sculpins found, a coldwater IBI was also calculated. The coldwater IBI was 10 (poor).

Summary

Skinner Creek is a fairly large stream in Green County that, while having a fair diversity of forage species, does not appear to hold the numbers of forage fish or game species in any appreciable numbers that one might expect from a stream this large. White sucker dominated the fish assemblage at all three of the

sampled sites. The stream has an interesting diversity of warmwater and cold/coolwater species. (It should be noted that this survey was conducted near the end of a cool, wet summer). Trout are not stocked in Skinner Creek, so they likely are coming down from Bushnell Creek or up from Zander Creek where both brown and rainbow trout are stocked. It was also interesting to note that while no mottled sculpin were found at Klondike Road, they were a major part of the fish assemblage a couple of miles upstream at Hiawatha Road. Overall, the IBI's at all sites were fair or poor which would coincide with the lack of fish observed in this stream. Species such as northern hog suckers and redhorse species were noticeably absent. While a lack of habitat can explain some of this condition, this stream is only partly meeting its potential. Further investigation is warranted.

Management Recommendations:

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

Deploy temperature and Sonde devices to determine the thermal regime of this system and to determine if there are changes in water chemistry, particularly dissolved oxygen, that might be limiting the number of fish in this stream.

Consider adding Skinner Creek to the state's list of impaired waters.