2004 Baseline Survey of **Legler School Branch**

Little Sugar River Watershed (SP12), Sugar/Pecatonica Basin

Green County

WBIC 882900

EGAD #3200-2004-04

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South Central Region

This 9 mile long stream in north central Green County serves as a tributary to the Little Sugar River. It is on the state's list of impaired waters due to habitat loss from nonpoint source pollution. The stream flows through agricultural area where heavy pasturing has degraded the stream banks. Once the stream enters the Village of New Glarus, it flows mainly though a box elder corridor where it is wide and shallow and the banks are shaded and devoid of vegetation. It is important to note that a previous survey conducted by fisheries management yielded only 1 fathead minnow.

On August 30, 2004, a baseline survey was conducted upstream from Second Street in the Village of New Glarus. A 70 meter stretch upstream from Second Street had riprap placed along the banks to stabilize the stream bank. The rip-rap helped add habitat to this area of the stream. The bottom is mostly rubble/cobble or gravel. Since this stretch is also a residential yard, grasses grow all the way down to the water's edge, further stabilizing the bank. Above this area, the stream is wide and shallow. The bottom is mostly silt and clay that contains little habitat. A total of 150 meters were shocked using a 240 volt stream shocker with two probes. All fish species were collected in order to calculate an Index of Biotic Integrity (IBI).

The water temperature was 58°F. The stream averaged about 2 meters wide and 0.35 meters deep in the area that had stream work done. Above this section, the stream was approximately 2.7 meters wide and 0.15 meters deep. Flow was measured at 2.55 ft^3/second (0.072 m^3/second). A habitat survey and macroinvertebrate sample were taken at this site, but the results are not available at this time.

The following non-game species were collected:

Species	Number
Brook Stickleback	5
Green Sunfish	7
Mottled Sculpin	273

In addition, 4 brown trout (11.7", 10.6", 10.4", 8.7") and one largemouth bass (2.3") were collected. It is important to note that all of the fish, with the exception of 48 mottled sculpin, were collected in the 70 meter stretch where the bank stabilization was conducted. The warm-water IBI for this site is 31 (fair). The coldwater IBI for this site is 50 (fair).

Summary
This section of Legler School Branch is certainly interesting in the polarization of fish species it contains. On one hand it contains cold/cool water indicators like brown trout and mottled sculpin. On the other hand, it also contains green sunfish and largemouth bass. (It should be noted that this survey was conducted near the end of a cool, wet summer). It was also interesting to see the high numbers of fish, particularly mottled sculpin in the area which had some streambank work done, compared to the other portion of this surveyed segment. It goes to show what a little habitat improvement can do. It was formerly believed that this stream had the potential as a warm water forage fishery. However, the numbers of mottled sculpin indicate that the stream may have potential to be cold water. The Little Sugar River, downstream from this site, is a Class II trout stream. Further monitoring is needed to determine if Legler School Branch might have the potential to serve as a coldwater tributary to the Little Sugar. This section of the stream may not provide

the best gauge as to the health of the stream overall as the fish diversity and numbers may be inflated because of the streambank work improving the habitat for a portion of this site.

Management Recommendations
Employ agricultural best management practices in the upper two-thirds of the stream to reduce sedimentation and other nonpoint source impacts to the stream

Slope and stabilize stream banks along the length of the stream.

Deploy temperature monitors to determine the true potential for this stream.