Project Description
Lake Superior coastal wetlands and streams provide vital fish and wildlife habitat and strongly influence the Lake’s ecosystem processes, yet there are significant gaps in what we know about their ecological condition. The goal of The Lake Superior Coastal Wetland and Stream Monitoring Project was to utilize Great Lakes Coastal Wetland Consortium (GLCWC) community indicators and collaborate with professionals and volunteers to assess the condition of three Wisconsin Lake Superior coastal wetlands and their watersheds. Allouez Bay, Lost Creek Bog and Sioux River Slough were selected for this study to represent a range of conditions present in the basin. The water quality in three tributaries to these coastal wetlands was monitored over one season and current land cover characteristics within the watersheds were evaluated. As more data are collected in the future, we will be better able to understand the current health of streams and estuaries and how changing land cover in each watershed is affecting water quality and habitat in the Lake Superior basin.

Watershed Description
The Lost Creek watershed is 6,345 acres. Land cover is 2.7% impervious and 19% open, which includes agricultural, pasture, urban yards, and forests with trees less than 16-years old. Research shows water quality impairments begin to occur when land cover in a watershed has been converted to greater than 10% impervious cover or is more than 60% open land.

Estuary Description
Lost Creek Bog features an estuarine system at the drowned mouths of three small creeks, Lost Creek 1, 2, and 3. A coastal barrier sand spit forested with spruce and pine separates the wetlands from the lake. The entire estuary and the downstream portions of the creeks are located in a State Natural Area. Several rare plants and animals have been recorded and migratory waterfowl and other water birds make extensive use of this site. Observed disturbance at the site included local roads, residential development and a power line. The Great Lakes Coastal Wetland Consortium (GLCWC) classifies the Lost Creek Bog study area wetlands as riverine: open, drowned river-mouth (RRO).

Lost Creek #1 Description
All stream sampling was conducted on Lost Creek #1. It is a spring-fed, Class II brook trout stream that also supports migratory runs of other salmonids. It is shallow, sandy and has little in-stream cover. Both the upper and mid-stream sample sites have a rocky bottom and flow through wooded areas. The upper sample site is above the falls. The downstream sample site is just upstream of Hwy 13 and has a sandy bottom.

Sampling Methods and Results
Methods developed by the GLCWC were used to collect and analyze estuary health. Macroinvertebrate samples collected during the summer of 2007 indicate that Lost Creek Bog is a “mildly impacted wetland community that is beginning to show signs indicative of anthropogenic disturbance.” Lost Creek #1 macroinvertebrate samples were collected by both volunteers and LSRI staff using WDNR protocols. Results from our first year show that volunteer data are comparable to professional data. Sampling results show HBI water quality conditions ranging from good to excellent along upper, mid and lower reaches of the stream. The land cover map shows the distribution of impervious surfaces and open lands currently in the watershed (see reverse side).

For more information, the full report can be viewed at http://www.uwsuper.edu/lsri/index.cfm.
Lost Creek Watershed

County: Bayfield

Local Jurisdiction: Town of Bell

Watershed Size: 6,345 acres

Open Lands: 1,207 acres/19%

Impervious Surface: 173 acres/2.7%

GLCWC Classification: Riverine: open, drowned river-mouth

Lost Creek Bog

Overall IBI: 95

Mildly Impacted - wetland community is beginning to show signs indicative of anthropogenic disturbance.

~ References ~


