

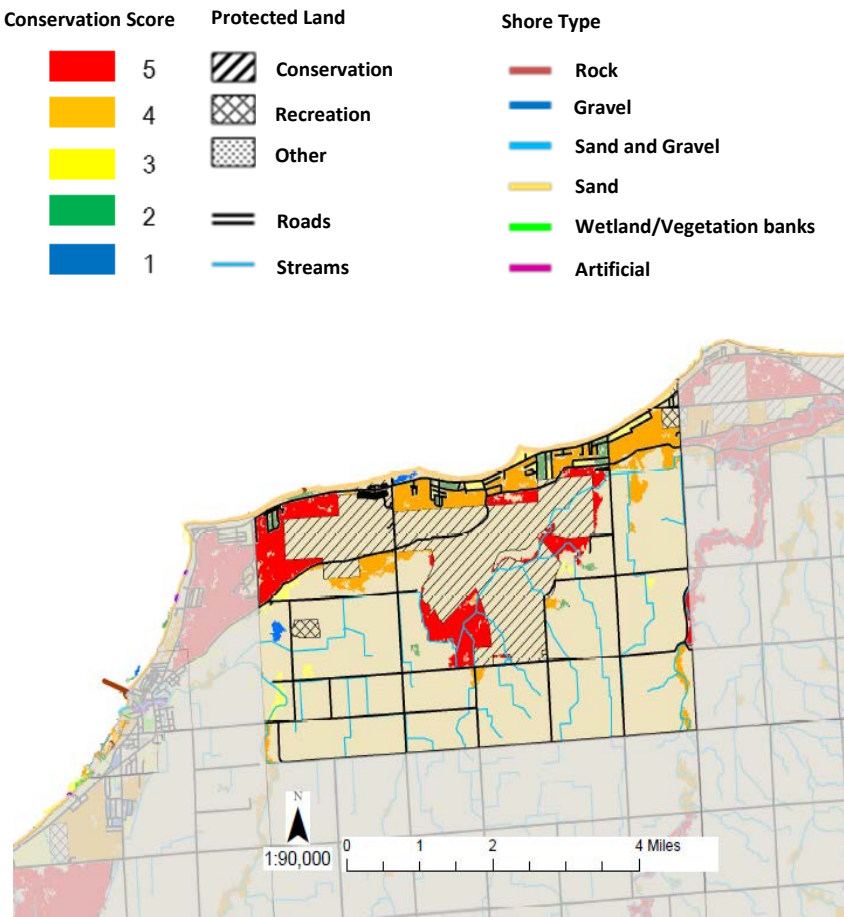
Identifying Natural Areas for Conservation in Michigan's Thumb

HOW THE AREAS WERE EVALUATED Michigan Sea Grant conducted a series of analyses using Geographic Information System (GIS) software and a variety of data including the location, size and shape of wetlands, forests, streams, roads and parks in the region. Undeveloped patches of land in Michigan's Thumb were given an overall score, with 5 being the highest and 1 being the lowest priority for conservation based on the following:

- **Habitat Scores** Each patch of undeveloped land was evaluated based on its ability to provide habitat for five different animal groups: fish, amphibians and reptiles, raptors, waterfowl and shorebirds. For example, undeveloped lands within 0.4 km of Lake Huron provide a stop-over site for migrating landbirds and raptors and, therefore, received a higher habitat score. The five animal-specific scores were averaged creating a composite habitat score for each natural area.
- **Landscape Scores** Twelve different landscape and land cover characteristics were also used to evaluate the undeveloped patches of land. For example, natural areas that were large, adjacent to parks, contained streams and were surrounded by farms rather than pavement received a higher score because the site could provide a range of benefits for recreation, water quality and animals if adequately protected.
- **Overall Conservation Score** The habitat and landscape scores were added together, with each contributing equally to the final conservation scores shown in the maps. Statistical software was used to divide the natural areas into five groups based on their overall conservation score. Natural areas that received a high conservation score are seen as "hotspots" or high priorities for future conservation efforts.

LAKE TOWNSHIP

Lake has a population of about 996 people with the majority of people working in construction and health care. The township features Albert E. Sleeper State Park and Rush Lake State Game Area in close proximity to high-priority land; this protected land could be expanded to include additional land for conservation and recreation. Nearly 46 percent of the undeveloped land in the township is considered high priority for conservation in part because of the large wetland area and expansive, sandy shoreline. As you can see from the map and tables, 22.2 percent of the land is already protected for conservation and recreation, while 14.5 percent is undeveloped and unprotected.



Lake Township Summary

Total land area	13,228 acres	
Landuse in township	Area (acres)	Proportion
Developed land	427	3%
Farmland	6,622	53%
Grassland	773	6%
Forest	615	5%
Wetland	4,074	32%
Openwater	95	1%
Total *	12,606	100%

Natural areas *	1,912 acres
	14.5% of total area

Conservation Score	Area (acres)	Proportion
5	871	46%
4	769	40%
3	160	8%
2	82	4%
1	30	2%

Protected lands	2,934 acres
	22.2% of total area

Shore type	Length (m)	Proportion
Rock	108	1%
Gravel	0	0%
Sand and Gravel	0	0%
Sand	10,017	99%
Wetland/Vegetation	0	0%
Artificial	0	0%
Total shore length	10,125	100%

* Land patches smaller than 4 acres were not evaluated.

Figure 2. Map and summary data about Lake Township, illustrating areas that are important conservation opportunities.