

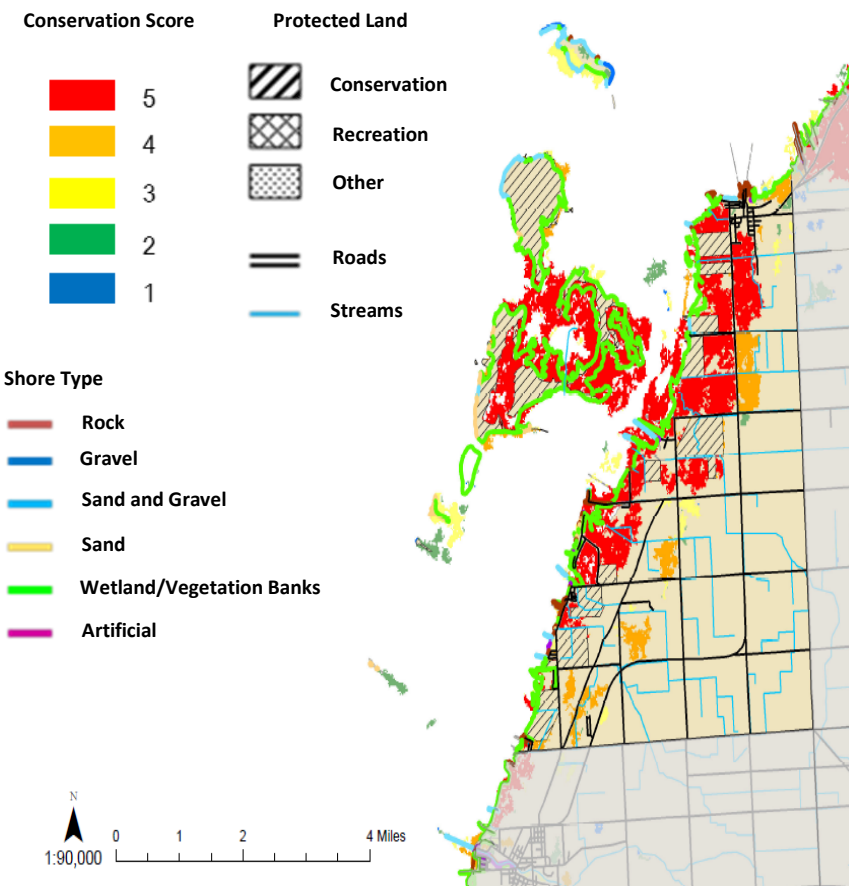
Identifying Natural Areas for Conservation in Michigan's Thumb

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.

FAIRHAVEN TOWNSHIP

Fairhaven has a population of about 1,259 people with the majority of people working in agriculture, forestry, fishing, hunting and health care. The township features the Wildfowl Bay State Wildlife Area in close proximity to high-priority land; this protected land could be expanded to include additional land for conservation and recreation. Nearly 70 percent of the undeveloped land in the township is considered high priority for conservation in part because of the large wetland area and expansive, undeveloped vegetative shoreline. As you can see from the map and tables, 17.1 percent of the land is already protected for conservation and recreation, while 15.8 percent is undeveloped and unprotected.



Fairhaven Township Summary

Total land area	13,517 acres
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Landuse in township	Area (acres)	Proportion
Developed land	785	6%
Farmland	7,059	56%
Grassland	603	5%
Forest	1,345	11%
Wetland	2,835	22%
Openwater	60	0%
Total *	12,687	100%

Natural areas *	2,132 acres
	15.8% of total area

Conservation Score	Area (acres)	Proportion
5	1,427	67%
4	510	24%
3	147	7%
2	48	2%
1	0	0%

Protected lands	2,313 acres
	17.1% of total area

Shoreline type	Length (m)	Proportion
Rock	7,554	8%
Gravel	1,301	1%
Sand and Gravel	10,333	11%
Sand	3,700	4%
Wetland/Vegetation	73,663	76%
Artificial	595	1%
Total shore length	97,146	100%

* Land areas smaller than 4 acres were not evaluated.

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