



**Great Lakes Protection Fund**

1560 Sherman Avenue, Suite 1370, Evanston, Illinois 60201

Tel 847-425-8150 Fax 847-424-9832 [glpf.org](http://glpf.org)

**Funded Project**

## A Comprehensive Study for Great Lakes Shorelines

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Project No.	470
Timeline	1998 – 2002
Award Amount	\$472,000
Team Leader	Guy A. Meadows, University of Michigan

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This team developed and disseminated a quantitative nearshore habitat change model to aid shoreline planners and managers in protecting the physical aspects of nearshore ecosystems. Results from six sites demonstrate that nearshore habitats are dynamic, that biological community composition changes with structural habitat, and that shoreline armoring results in significant long-term ecosystem changes. The team also found that traditional approaches to shoreline management are likely to lead physical habitat changes that encourage the colonization, proliferation, and dispersal of invasive species such as zebra mussels and round gobies.

The team's work resulted in new bio-sampling methods and protocols for Great Lakes nearshore areas; new methods to collect and interpret side scan sonar in shallow nearshore waters; new techniques to identify and track the movement of nearshore sand bodies; and new approaches to quantitatively assess nearshore cumulative change—both physical and biological.

The team's success led to an increased research and regulatory focus on nearshore habitats by the USGS, the US EPA, the USACE, and Coastal Management Programs of several Great Lakes states.