

RESTORING, RETROFITTING, AND RECOUPLING MICHIGAN'S GREAT LAKES SHORELANDS

The U-M Water Center engages researchers, practitioners, policymakers, and non-profit groups with the goal of supporting, integrating, and improving current and future restoration and protection efforts.

The grants program is an important part of the Water Center's efforts to enhance restoration and protection activities by engaging exceptional multi-sector teams in advancing evaluation and assessment of restoration projects.

FOR MORE INFORMATION

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PROJECT SUMMARY

Great Lakes shorelands are desirable places to build. They are also valuable ecological and dynamic physical systems. Recent climate modeling predicts increased fluctuations in Great Lakes water levels and increased storminess. Associated impacts to Great Lakes shorelines include ecological changes, potential damage to public and private property and potential public safety risks. Additionally, substantial damage has already been done to Great Lakes shorelands from encroachment into coastal wetlands by human development, as well as from receding beaches and structures erected to protect developed shorelands.

Once structures are built and shifting shorelines result, managers and property owners have limited options, such as armoring, constructing bio-structures, nourishing with imported sand, or retreating. Each option has implications in terms of the natural ecological and physical functioning of the shoreland system, as well as short and long-term public and private costs.

Leveraging recent and ongoing work on Great Lakes coastal habitats and shoreline dynamics, and collaborating with the Michigan Office of the Great Lakes, the research team will analyze shoreland physical and ecosystem dynamics, conduct fiscal impact assessments, and work with three Michigan coastal communities to assess the potential to restore, retrofit, and recouple Michigan's dynamic shorelands through state shoreland management policies and laws as well as local master plans, regulations, and polices. Simultaneously, the project is designed to evaluate the efficacy of those methods and processes.



Michigan Sea Grant

