Marathon County & UW-Stevens Point

Eastern Lakes Times

April 2012
Volume 1, Issue 1

Eastern Lakes Project—Purpose

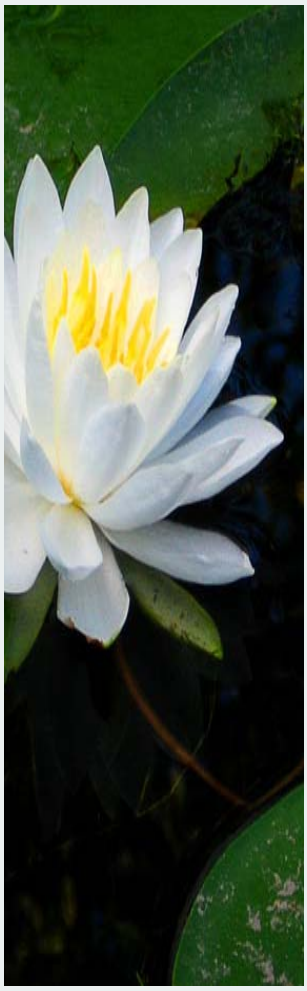


Photo by Roger Zimmermann

The Eastern Lakes Project will assess eastern Marathon County lakes to plan for lake management and protection. The purpose of the project is to preserve the uniqueness of the area, support recreational activities, protect water quality, and balance development.

The project is a partnership of citizens, eastern Marathon County communities, Marathon County government, and the University of Wisconsin Stevens Point.

The study area includes Bass, Big Bass, Lost, Mayflower, Mission, Mud, Norrie, Wadley, Lilly, Rice, and Pike lakes and the communities that surround these lakes.

The results of the project will be used to guide land use and management decisions and policies that affect our lakes and to develop strategies and focus resources on the improvement and protection of the lakes.

There are 3 phases to the project:

- Scientific and social information collection
- Lake management plan development
- Lake management plan implementation

For more information:
mclakes@uwsp.edu

Eastern Lakes Project—Components

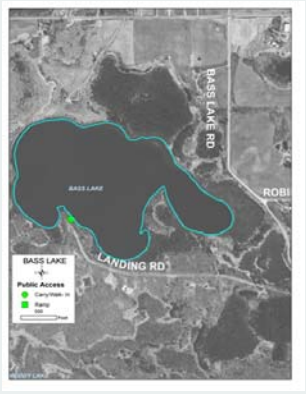
The Eastern Lakes Study includes data collection and analysis, predictive modeling, and plan writing.

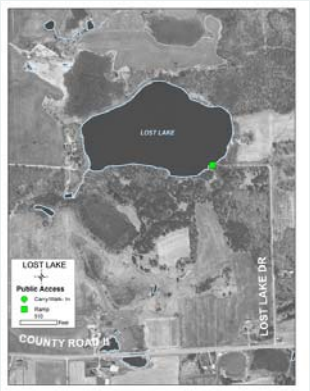
Project components:

- Social & cultural
- Land use/development
- Zooplankton
- Shoreland assessment
- Water quality
- Fisheries assessment
- Algae
- Paleolimnology
- Macrophytes

Descriptions and progress updates of each component will be covered in this issue and future issues of the Eastern Lakes Times newsletter.

www.co.marathon.wi.us/Departments/ConservationPlanningZoning/ConservationDivision/LakePrograms.aspx

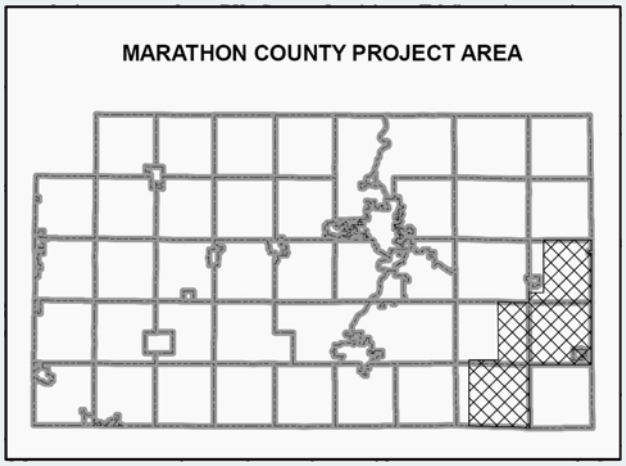


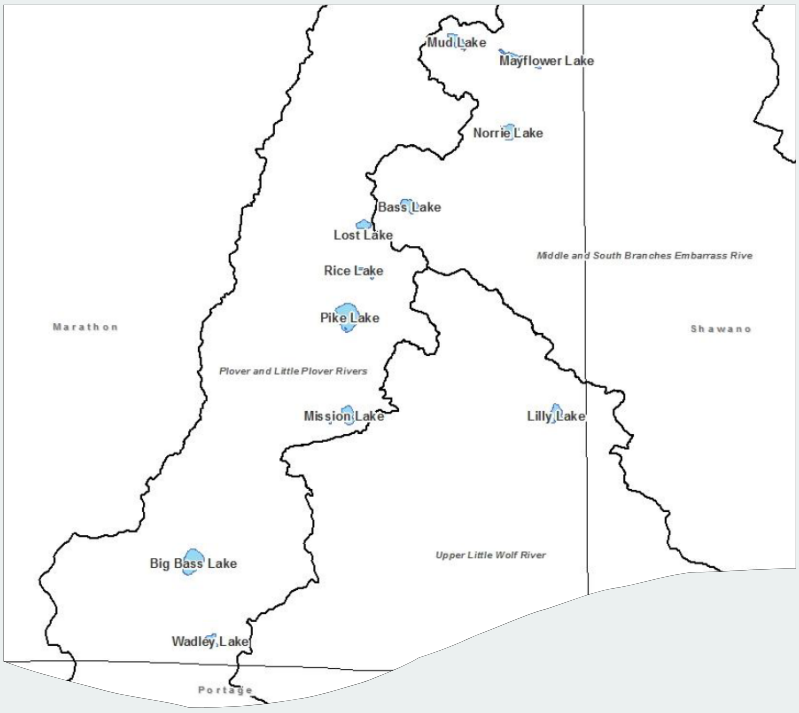


Project Area

The Eastern Lakes Project includes the south east Marathon County towns of Bevent, Elderon, Norrie, and Reid and the Village of Elderon.

The lakes are in the Wisconsin River basin and the Wolf River Basin.





Project Funding

The Eastern Lakes Project is 75% funded by Department of Natural Resources Lake Management Protection Grants. These grants are funded by motor boat fuel taxes.

The remaining costs of the project are covered through time donated by UWSP faculty and citizens, discounted rates at the UWSP water lab, financial contributions by area lake associations, and Marathon County in-kind staff time.

For more information on lake grants: dnr.wi.gov/aid

Social Information & Cultural Survey

Successful lake management planning and implementation is dependent on the actions of the users and residents of the lakes.

For this reason, it is important to not only collect and analyze scientific data about the lakes, but social information as well.

How users, residents, and nearby land owners *feel* about the lakes and what role they play in the community is also important. This helps to determine attitudes, attachment to the area, awareness of issues related to the lakes, barriers to change, capacity for change, and behaviors that impact the quality of the lakes.

This information was collected through surveys of visitors, lake residents, and area residents. The results of the surveys will be used to develop an education and outreach plan which will include activities such as field days, demonstrations, and other activities residents can do to protect and improve the quality of the lakes.

"Joining together to participate in the Eastern Lakes study will make all of us a little smarter, then we'll make the lakes a little better."

Jon Blume, Pike Lake property owner

Predicting Future Development & Loadings

A "build-out" assessment is used to predict the future development patterns of the lakes' watersheds.

A build-out uses existing land use conditions as a baseline to model future development patterns based on tax parcel data, existing zoning, and minimum parcel size regulations.

First, the existing land use is mapped to determine the acreage available for development. Secondly, existing land use regulations are modeled to create a development scenario.

Lastly, conditions such as phosphorus or sediment loading from the modeled change in land use is predicted.

Results from the modeling can be used to identify how and where to prevent future increases in phosphorus or sediment loading. It can also help to identify how and where it is possible to *reduce* loading.

History of Lake Environments

Paleolimnology is the study of the historical environment of lakes. It involves examining changes in lakes attributed to human activities or disturbances such as land clearing, changes in vegetation, and fire.

Paleolimnology can identify the impact of past events on water clarity, lake levels, and nutrient levels (trophic status). This information can be used to model cause-and-effect of disturbance and climate to lake health and predict the future health of the lakes.

Sediment cores are analyzed for chemicals, algae, pollen, and other characteristics. A chronology is determined by "radiometric dating". Past conditions are compared to present to track lakes' response to natural events, land use changes, and climate.

Sediment core sample Photo: WisDNR

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Do you have suggestions for articles or photos to share?
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diane.wessel@co.marathon.wi.us

This newsletter is sponsored by:
Big Bass Lake District
Mayflower Lake District
Pike Lake Sportsmans Club
Pike Lake Fishing Club
Wadley Lake Sportsmans Club

Citizen Lake Monitoring training
May 19th, 10 am
Mission Lake Shelter
For information on citizen monitoring: dnr.wi.gov/lakes/clmn/

Mission Lake
Photo by Roger Zimmermann

Lake Shore Assessment

Shorelands provide habitat for both aquatic and terrestrial plants and animals. They can be a source of water quality problems, or can be designed to improve the quality of runoff from the nearby landscape.

The Eastern Lakes Study will include an inventory and mapping of the existing condition of the shorelands of the lakes.

Information that will be collected include:

- Shoreland vegetation
- Slope
- Seawalls
- Rip rap
- Boat landings
- Boat houses
- Docks
- Erosion
- Direct drainage
- Buildings

This will be collected by UWSP staff by boat using global positioning systems (GPS) and cameras.

The shoreland assessment will be used to establish current conditions and to identify areas that may warrant intervention.

Intervention may be in the form of education and/or technical assistance as part of the implementation phase of the project.