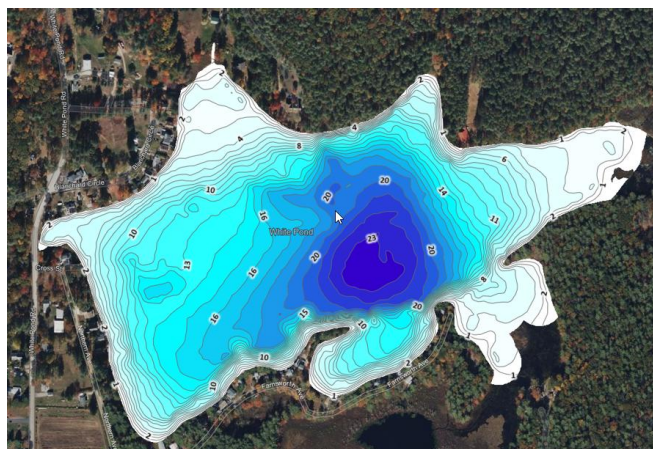


Statewide Bathymetry Project Watershed Planning Program (WPP)



Bathymetry – Coming to a Pond Near You



Completed Bathymetric Map

What is Bathymetry?

Bathymetry is simply the measurement of water depth. A bathymetry survey collects digital depth data to create depth maps for waterbodies in the way topographic maps show changes in altitude for hills and valleys.

Why?

There are approximately 2,500 freshwater lakes and impoundments in Massachusetts. Fewer than 1% of those have digital depth data available. The long-term goal of this project is to collect accurate digital bathymetric data and to provide those data in a usable format to state and federal agencies, municipalities, interest groups, and the public. The data and maps can

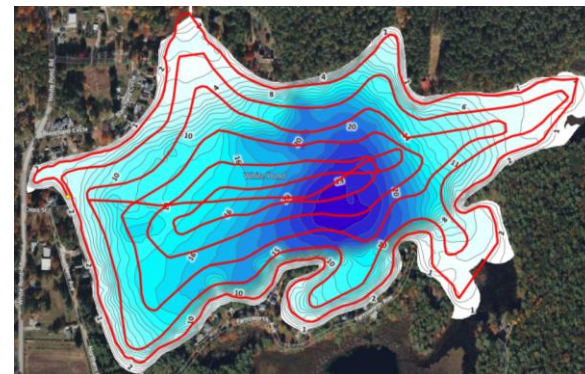
be used to:

- Develop a lake classification system.
- Inform the development of Total Maximum Daily Load (TMDL) calculations.
- Support ongoing Targeted Assessment Monitoring for Clean Water Act reporting.
- Support the development of Surface Water Quality Standards (SWQS).
- Provide data to Massachusetts Department of Fish and Game (DFG) for use in the effective management of wildlife and their habitat.
- Provide information/maps to the public for recreational use.
- Provide data and information to interest groups.

The goal is to develop a database of accurate maps and data for each Massachusetts freshwater body over the duration of the project.

What?

Bathymetry surveys collect three sets of data: depth, biovolume (the percent of the water column taken up by plants), and a general bottom hardness measure.



Bathymetry Survey Transect Track

How?

A survey crew typically visits the waterbody once to collect data. Larger lakes may require more than one visit. Staff use boats equipped with a Lowrance depth sounding unit and specialized transducers to collect data in a pattern across the entire lake. Data are uploaded to a data processing system which converts the files into maps, data tables, and geographic coverages. The data are also provided to DFG for their use and are available to the public via their website:

<https://www.mass.gov/info-details/massgis-data-masswildlife-inland-water-bathymetry>

When?

The Statewide Bathymetry Project is a long-term effort that will take many years to complete. Surveys are typically conducted in the early spring after ice out and the late fall when aquatic plants are in decline, and depth accuracy is high.

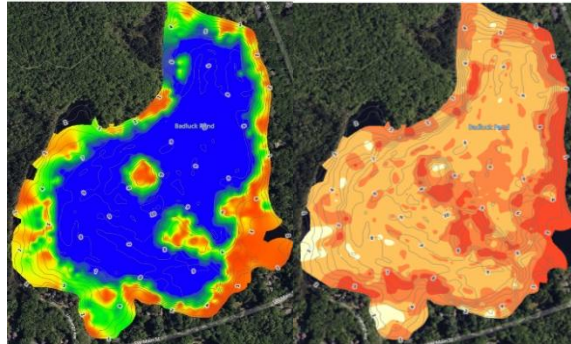
How can you participate?

State and Federal agencies, municipalities, interest groups and the public can submit a request to have a bathymetry survey conducted on a lake(s) that interests them. Interested parties should:

- Check the DFG website to see if your lake has already been surveyed:
<https://www.mass.gov/info-details/massgis-data-masswildlife-inland-water-bathymetry>
- Fill out a survey request form and submit it to the WPP for consideration, if your lake has not been surveyed.

At most 30 lakes can be surveyed yearly by WPP. Should greater than 30 requests be received, for a given year, WPP will prioritize lakes with the highest public interest and access first. Any lakes not surveyed in the year requested will be surveyed first in the following year.

If you have digital bathymetry data that you would like to make available to the public, please contact us to discuss the inclusion of your data into our database.



Biovolume Heat Map and Bottom Hardness Map

Results - How do I access the maps and data?

Electronic (JPG) bathymetry maps are available within weeks of conducting the surveys.

Available data include:

- Bathymetry Map
- Biovolume Heat Map
- Bottom Hardness Map
- Bathy/Biovolume/Hardness data (CSV)
- Google Earth Images
- Depth Shapefiles

Additional data may be available from DFG.

Contact Information:

Contact staff in MassDEP's Watershed Planning Program with questions about this monitoring program.

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