

PLEASANT LAKE

WATERSHED RESTORATION PLAN PROJECT

PROBLEM: LOW OXYGEN

Pleasant Lake and its public beach in Deerfield (Veasey Park Beach) are impaired for low dissolved oxygen and elevated bacteria, respectively.

GOAL: IMPROVE WATER QUALITY

Phosphorus is the driver of overall lake health and the likely culprit for the oxygen impairment. The plan will recommend conservation practices that reduce phosphorus in stormwater runoff within the watershed, which will improve water quality and prevent further degradation.



Photo: Tom Brennan

NEXT STEPS

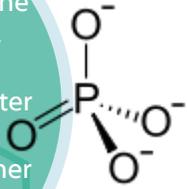
Set a water quality goal based on a scientific model.

Identify and prioritize areas for implementation of conservation practices that reduce sediment and nutrients from reaching the lake.

Educate residents on proper septic system & gravel road maintenance.

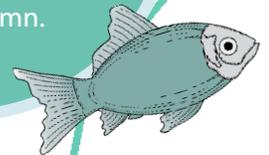
NONPOINT SOURCE POLLUTION

Excess phosphorus enters the lake in eroding sediment, groundwater (e.g. aging septic systems), or stormwater runoff, which contains fertilizers, detergents, or other phosphorus-based products.



Phosphorus is a key nutrient that stimulates algal blooms and excessive plant growth, particularly for invasive species.

Decomposition of excess algae and plant material depletes oxygen in the lake, leading to fish kills. Low oxygen in bottom waters can then release phosphorus back into the water column.

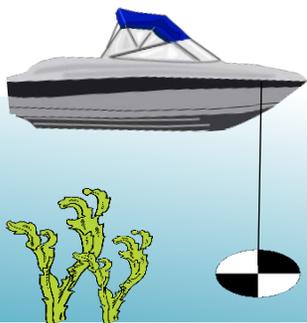


Green line represents the Pleasant Lake watershed boundary.

Algal blooms and uncontrolled sediment erosion along the shoreline can decrease water clarity, which can reduce shoreline property values.



Funding for this project was provided in part by a Watershed Assistance Grant from the NH Department of Environmental Services with Clean Water Act Section 604(b) funds from the U.S. Environmental Protection Agency. Factsheet developed by L. Diemer & K. Costa, FBE.



PROJECT TASKS & SCHEDULE

MAY 2015 - DECEMBER 2016

PROJECT TASKS

SCHEDULE

| | |
|--|-------------------|
| Host project kick-off meeting | May 2015 |
| Prepare site specific project plan (SSPP) | May 2015 |
| Complete water quality analysis | July 2015 |
| Conduct watershed, shoreline, and septic surveys to identify sources | August 2015 |
| Model current and future in-lake phosphorus | February 2016 |
| Recommend conservation practices that achieve water quality goals | February 2016 |
| Calculate potential phosphorus reductions from recommendations | February 2016 |
| Hold stakeholder meeting to generate public input | Spring 2016 (TBD) |
| Establish water quality goals | September 2016 |



PLEASANT LAKE, DEERFIELD/NORTHWOOD, NH

Current and future in-lake phosphorus is determined using a land-based model and build-out analysis, respectively.



Photo: Tom Brennan

The Pleasant Lake Watershed Restoration Plan will provide a prioritized action plan, measurable milestones, and criteria for measuring progress toward the established water quality goals.



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