

# Highland Lake Watershed Assessment Project

## #2017PT16

Waterbody Name: Highland Lake

Location: Falmouth, Windham, Westbrook - Cumberland County

Waterbody Status: Most at Risk, NPS Priority Watershed

Project Grantee: Cumberland County SWCD

Project Duration: November 2018 – December 2019

604(b) Grant Amount: \$5,460

Local Match: \$2,688



### PROBLEM:

Highland Lake covers 623 acres and its 8.4 square mile watershed is part of the Presumpscot River drainage. DEP staff and Highland Lake Association (HLA) volunteers have monitored Highland Lake's water quality since 1974. Highland Lake was previously listed as impaired due to a declining water quality trend. However, three phases of successful 319 grant-funded implementation projects led to water quality improvements and removal from DEP's impaired list in 2010. The lake is currently listed as threatened on the Maine DEP's Nonpoint Source Priority Watersheds list.

In 2014, the lake experienced a picocyanobacteria bloom for the first time. This bloom reduced Secchi disk transparency in the lake to less than two meters in late July. The bloom occurred again from 2015 – 2017, followed by two summers of reduced clarity but no official bloom. This problem was the impetus for the development of a new watershed-based plan for Highland Lake and more extensive study of the lake and watershed.

### PROJECT DESCRIPTION:

This project aimed to compile and review existing water quality and watershed survey information for Highland Lake and to assess the condition and maintenance needs associated with existing Best Management Practices (BMPs) in the watershed. This information will be incorporated into a watershed-based plan (WBP) project, which was funded through a 604(b) grant and will close out in 2020 (Highland Lake Watershed-Based Management Plan Project #20180008). The WBP will provide a 10-year adaptable guidance plan for improving Highland Lake's water quality.



Photo credit: Rosie Hartzler, Highland Lake Association

### *Suggested Citation:*

*Maine Department of Environmental Protection (2020) "Nonpoint Source Management Program 2019 Annual Report,". Augusta: MDEP.*

## PROJECT OUTCOMES:

- Project partners inspected existing BMPs on 34 private roads in the watershed and documented their current condition. Fifteen of these roads were found to be in need of maintenance or repair.
- Results from BMP inspections were entered into Highland Lake's NPS site tracker to help inform future work. Some of the identified sites have already been addressed through town grants.
- Existing water quality and other watershed data were collected, compiled and assessed to make sure they met quality assurance standards. These data will be used to inform the Highland Lake Watershed-based Protection Plan, due to be completed in 2020.

Examples of roads assessed during BMP inspections



## PROJECT PARTNERS:

Highland Lake Association  
Highland Lake Leadership Team  
Town of Falmouth  
Town of Windham

## CONTACT INFORMATION:

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