

TO: FALMOUTH TOWN COUNCIL
HIGHLAND LAKE ASSOCIATION STATEMENT
in response to Maine Inland Fisheries & Wildlife Department request to expand
public boat access on Highland Lake as condition for fish stocking program
for public hearing February 13, 2012

In the late fall of 2010, Highland Lake was removed from state and federal lists of “endangered” waterbodies. This monumental event resulted from 13 years of extensive efforts by the Highland Lake Association and countless volunteers working with the Cumberland County Soil and Water Conservation District. Other partners and supporters over these years included: the Maine Department of Environmental Protection, the Casco Bay Estuary Partnership, and the Towns of Falmouth and Windham.

The focus of the Highland Lake Association is education and we are lucky to have residents within the watershed who love to learn, love to listen, and love to work to protect this valuable natural resource for generations to enjoy.

■ The issue at hand is the question of expanding the public boat access to accommodate trailered boats, which would then continue the Maine Inland Fish and Wildlife Agency’s fish stocking program for Highland Lake. We’ve included a June 2011 letter from IF&W’s biologist Francis Brautigam, to Town Manager Nathan Poore. The letter was shared with HLA members attending our annual meeting in July 2011. An ad hoc committee was formed, representing all of Falmouth’s roads and some of Windham’s. That committee met with Mr. Poore and Francis Brautigam last November 2011. Councilor Faith Varney was in attendance at both meetings. Notes from that meeting are also included in your packets.

■ There are numerous reasons why this expansion is not a good idea for Highland Lake, We’ll state the two overarching:

- 1) The primary one is the onerous threat of invasives, especially Eurasian milfoil, into Highland Lake. It takes but one strand to infect an entire water body. Little Sebago Lake is currently fighting this very situation — at the cost of more than \$50,000.

On Highland Lake volunteers do random monitoring of watercraft at the public access and at various private access sites. Though it is the law to “soak before you float,” an unsupervised public access can pose an enormous threat to water quality. One summer’s boating could put this lake back into the “endangered” category.

- 2) The second critical issue is the depth of this lower portion of Highland Lake, where the public boat access exists. There is an aerial view of the Lake and one of depth recordings in your packets. The effects of increased motorized boat traffic on the wildlife habitat in that area, the potential for sediment disturbance in these shallow waters, and the soil and shoreline erosion from wake wash could all be quite destructive. This southern end of the lake is under 10 feet from the point of narrows to the dam. The channel itself, from the boat access south to the dam, is under 6 feet.

Propellers stir up shallow lake bottoms releasing nutrients and phosphorus, which decreases available oxygen; thus diminishing water clarity and quality affecting fisheries and promoting algae growth. Research on similar lake sizes around the country have found average increases in phosphorus to be 28-55%. This would effectively wipe out 13+ years of work.

There have also been studies on the increase in carbon dioxide in lake water. The lower 1/2 mile of Highland Lake is a not only a fish habitat, it is home to beavers, birds, ducks, loons, turtles, Canadian geese, eagles, and osprey — all potentially affected by increased motorized boat traffic.

We appreciate the invitation to speak on this matter and are happy to provide any research documents you might like.

Maine Department of Inland Fisheries and Wildlife

358 Shaker Road, Gray, Maine 04039

Telephone: 207-657-2345 ext.112 Fax: 207-657-2980

Email: francis.brautigam @maine.gov

Governor Paul R. Lepage Commissioner Chandler E. Woodcock

June 17, 2011

Nathan Poore

Falmouth Town Manager

271 Falmouth Road

Falmouth, Maine 04105

By way of introduction, my name is Francis Brautigam and I'm the Regional Fishery Biologist for the Sebago Lake Management Region, Maine Department of Inland Fisheries and Wildlife (MDIFW). The purpose of this letter is to inform you of a matter that will likely result in the cancellation of existing Department stocking programs on Highland Lake.

The Maine Department of Conservation (MDOC) public boat launch (hand-carry only) does not offer a level of public access for trailered boats afforded those who reside on this well developed 630 acre lake, where large watercraft are prevalent. This inequity is inconsistent with the MDIFW's current policies on stocking and access that were established to ensure that the public has reasonable and equitable access to utilize fish that are raised and stocked using sportsmen's license dollars. The MDIFW has been aware of this inconsistency, but recent scrutiny by Representative Stephen Wood (Town of Sabbathus) has elevated the level of concern. I offer additional discussion and clarification of the issues below.

The public hand-carry boat launch on Highland Lake in Westbrook was constructed by MDOC in 1976. The Maine Department of Inland Fisheries and Wildlife prompted the access initiative in response to complaints from anglers who were denied access to the Highland Lake. It appears that several sites were investigated for the launch site, and there is information in the file to indicate the MDIFW requested the development of access to accommodate 18-foot trailered boats. Apparently local opposition to the development of a trailered boat launch resulted in a decision to construct a hand-carry access.

During the 1970's the MDIFW's policy on stocking and public access was reflected in comments communicated by then Regional Fishery Biologist Stu DeRoche. In various related correspondence Stu indicated, "the Department only requires a public way to the lake where the public can get to the lake to fish...such that all people wishing to gain access can do so without trespassing". The development of a hand-carry launch was apparently consistent with the policy at that time to justify stocking.

The Department's current (2009) written policy on stocking and public access reads as follows:

H4.1 Stocking Public Waters (January, 2009)

The Department stocks fish to provide fishing opportunities that would not otherwise be available. Fish culture in Maine is limited to salmonid species (trout and salmon). Warm water species, such as bass, pickerel and perch are prolific and can sustain their populations without stocking.

The Department stocks public waters to benefit the general fishing public, not just those who own shore frontage on the waters of the State. Therefore, the Department will not stock waters that lack reasonable and equitable public access.

The following factors will be considered in determining if reasonable and equitable public access exists:

- ***Size and type of watercraft in common use,***
- ***Type of available access for those that reside on the lake shore (public access should be at least similar to, but no less than that available to shoreline residents),***
- ***Availability of safe and adequate parking,***
- ***Size of the water,***
- ***Juxtaposition to human population centers,***
- ***Current and future potential use,***
- ***Kind of fishing opportunities in common use (present & potential),***
- ***Seasonal fishery management focus***
- ***Existing shoreline development,***
- ***Availability of existing access for use by the general public (considering use fees, hours of operation, residency/affiliation requirements, and other potential limitations/restrictions).***

Current policy strives to establish water access and launching opportunities consistent with the watercraft in common use on the pond, so as to create safe and equitable boating and angling opportunities for those who visit public waters of the

—continued

state. It is very apparent (based on a number of factors including observed prevalent use of larger motorized boats on the lake) the access available to those who visit the lake (MDOC's launch) is dissimilar to those who reside on the lake. The MDIFW concurs with Representative Stephen Wood's contention that there is a lack of reasonable and equitable access to Highland Lake, with regard to MDIFW stocking policy, and as such justifies suspension of MDIFW stocking programs.

The Department has been stocking Highland Lake since the 1930's, although programs and fisheries management focus has changed over time. Changes in fisheries management reflect changes in management opportunity, including historical lake water quality. Highland is currently stocked with 500 fall yearling brown trout, 150 fall yearling landlocked Atlantic salmon, and 30 adult landlocked Atlantic salmon. As with management stocking programs, stocking policies have also evolved as scrutiny over the use of limited Department resources has increased.

It appears that the existing MDOC hand-carry launch site could be physically modified to support use by trailered boats, as initial plans in the 1970's were to develop the site for trailered boats. Furthermore, recent information on early season water depths and wildlife issues have also been investigated and do not appear to be obstacles to modifying the hand carry launch to accommodate smaller trailered boats. While the option to modify the launch has not been thoroughly investigated it will not likely receive additional attention at this time unless the Town is interested and supportive of this option. Furthermore, in the absence of support from the Town to resolve the inconsistency the MDIFW will be obligated to suspend stocking. I hope there is Town support so the Department may continue to actively manage this public resource.

Please let me know if I can offer any additional clarification or information in regards to stocking or improving public access opportunities at the MDOC launch.

Francis Brautigam
Regional Fisheries Biologist
Sebago Lake Region

cc: George Powell, MDOC
John Boland, MDIFW
Peter Bourque, MDIFW
Joe Dembeck, MDIFW
Representative Stephen Wood
Colleen Hilton, Mayor of Westbrook
Tony Plante, Windham Town Manager

Meeting Notes
Highland Lake Fish Stocking and Boat Access

November 29, 2011 (3:00 PM)

Attendance: Nathan Poore, Ralph Johnson, Tom Bannon, Mike Fasulo, Faith Varney, Jim Thibodeau, Paul Caron, Francis Brautigam (MDIFW Regional Fisheries Biologist) and George Powell (Department of Conservation).

There was a general discussion about MDIFW position/policy regarding fish stocking and public boating access. Mr. Brautigam explained the policy and the purpose of the policy. He indicated that fish stocking would be suspended unless the town supports an enhanced boat access site that would accommodate larger boats. Mr. Brautigam stated that the purpose of the policy is to ensure and encourage equitable access to public water bodies in the State of Maine. This has been a long standing policy of the State and indicated there is no "grey" area in the interpretation of the policy. It is being applied to other locations in the State and needs to be treated no differently for Highland Lake.

There was a question from meeting participants regarding options to stock the lake with private or local money and maintain boating access status quo. Mr. Brautigam said that it would require a private license to stock the lake but the same policy applies regarding equitable boat access. He went on to state that a permit would be denied unless there were significant boating access improvements.

There was some discussion about what size boats would be accommodated in an expanded boat access site and how many boats could be accommodated at an expanded site. Mr. Brautigam stated that the MDWIF would be looking for a launch site that could accommodate up to 10 boats with a length between 16 and 18 feet. He said the objective is to accommodate anglers in open skiff style boats.

Mr. Brautigam said that the current site can not accommodate the desired objective. He also said that the design of an expanded site could "self restrict" larger boats by limiting the width of the launch, not providing dock space, and tighter turning radii.

All at the meeting indicated that better signage about the use of the site could be helpful, regardless of whether it will be expanded.

Similar to the concerns raised at the August 30 meeting, attendees noted that there were many issues to consider including the following: mil foil threat, shallow water launch site, most fish were caught through the ice, additional boat traffic will create safety concerns. Mr. Brautigam indicated that he appreciated the concerns but that there were either solutions or similar concerns for most water bodies but the policy is still in place — it is a balance of priorities.

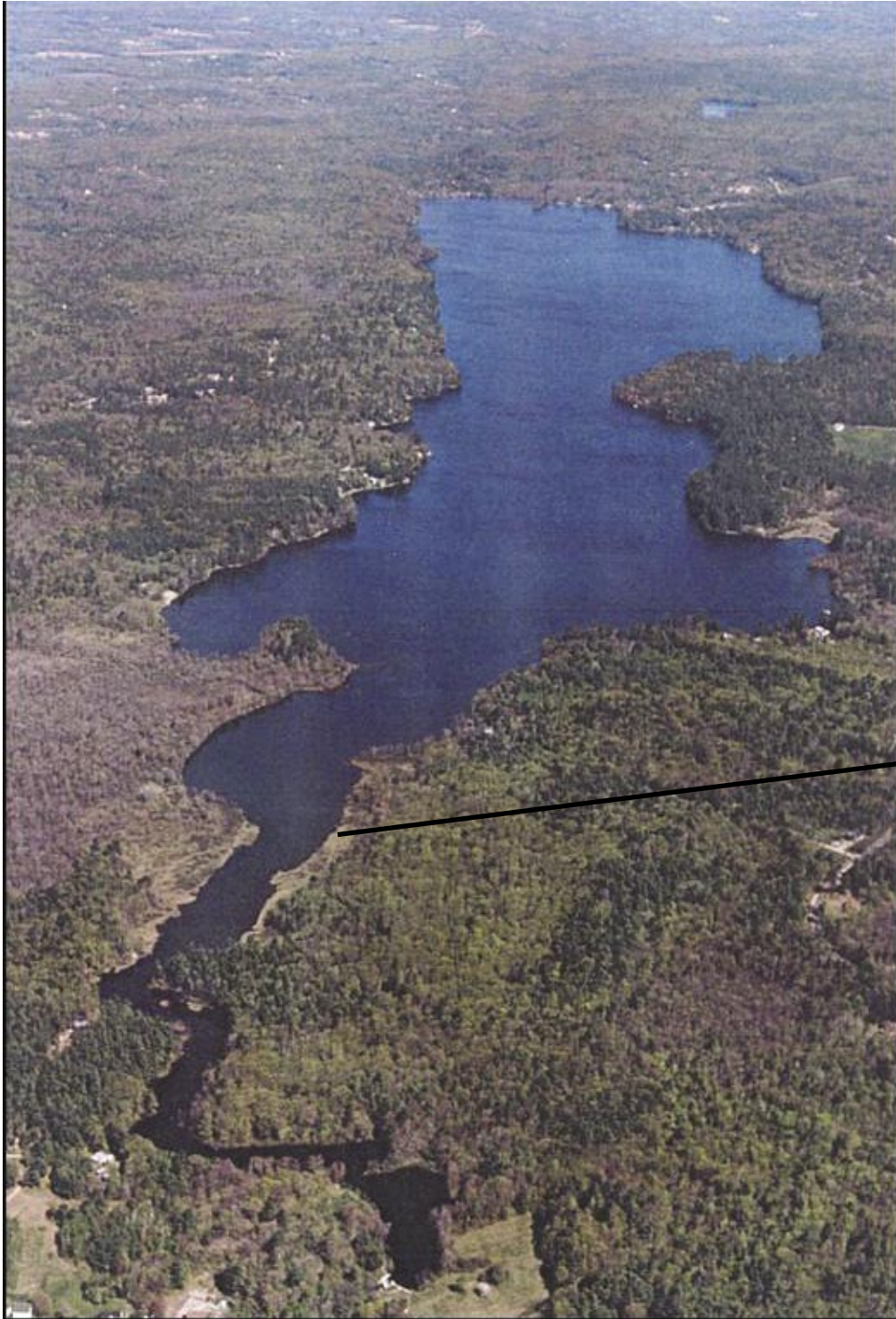
The participants were asked to conduct a straw poll regarding their position on this matter (Town and State staff did not participate). Most meeting participants indicated that they represented the views of various lake side associations. They were asked if they could support an expanded boat launch and if they voted "no" they understand that cold water fish species stocking would not be an option in the future. Five people voted "no" and one participant indicated that he could support a launch with a very narrow focus (designed to accommodate the smallest and fewest boats possible)/ He indicated that the public should have better access.

Nathan Poore informed the group that the Town Council will need to consider this matter and that he would recommend a public hearing prior to sending a recommendation to the MDIFW. Mr. Brautigam agreed to attend a public hearing with the Town Council.

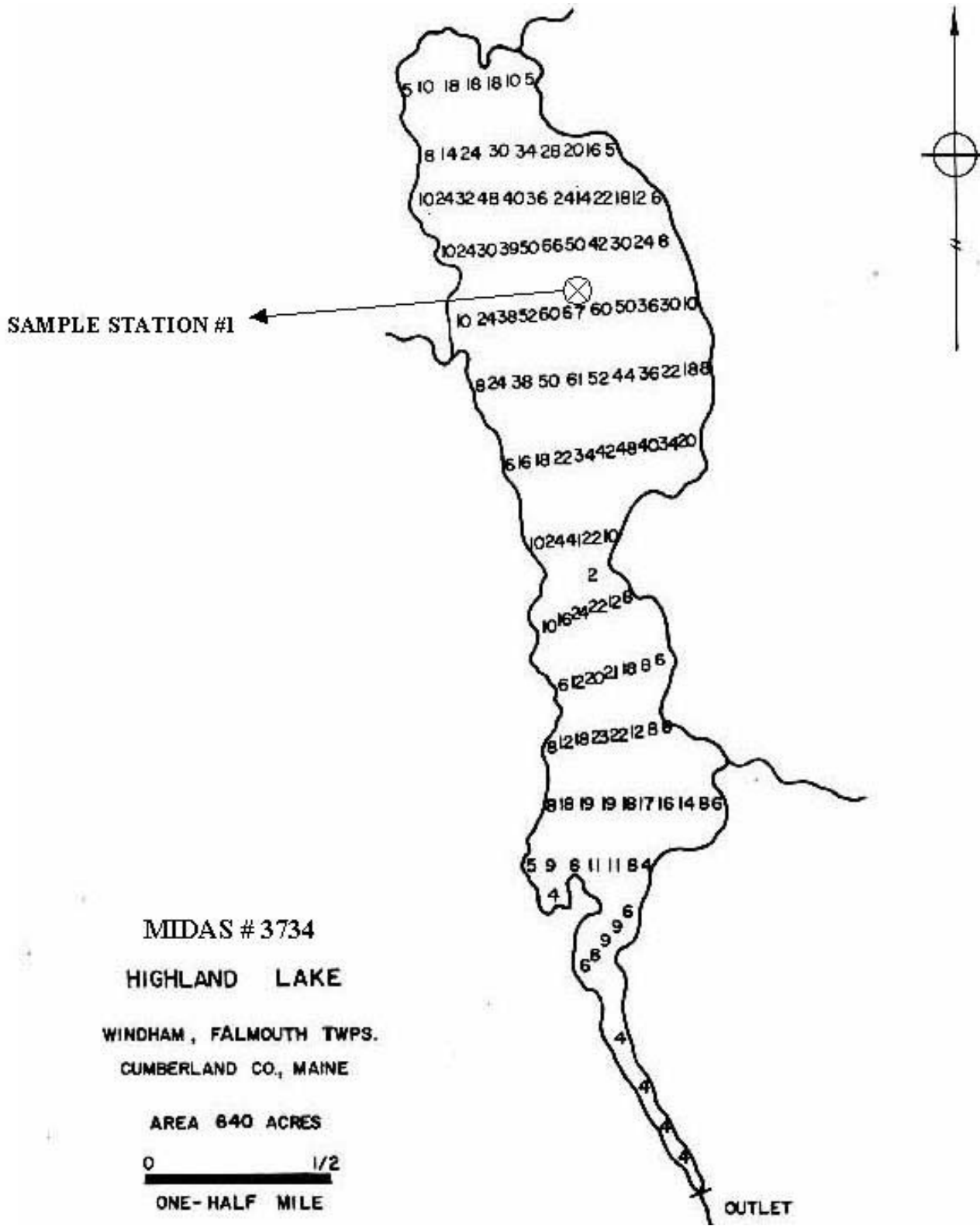
The meeting adjourned at approximately 4:15 PM.

Respectfully submitted: Nathan A. Poore

HIGHLAND LAKE



public boat
access



MIDAS # 3734

HIGHLAND LAKE

WINDHAM, FALMOUTH TWPS.

CUMBERLAND CO., MAINE

AREA 640 ACRES

0 1/2

ONE-HALF MILE



Section 319

NONPOINT SOURCE PROGRAM SUCCESS STORY

Maine

Community-based Erosion Control Efforts Stop Water Quality Decline

Waterbody Improved

In the 1980s and 1990s, Highland Lake showed troubling signs of declining water quality that threatened the loss of the lake's brown trout fishery. Excessive soil erosion throughout the watershed contributed to significant declines in water clarity and dissolved oxygen levels, prompting the Maine Department of Environmental Protection (DEP) to add Highland Lake to Maine's 1990 Clean Water Act (CWA) section 303(d) list of impaired waters for aquatic life support. Locally led restoration work over the past 13 years has addressed significant erosion sites and reduced polluted runoff. Highland Lake water clarity has gradually stabilized and now meets water quality standards, prompting the Maine DEP to remove the lake from the CWA section 303(d) impaired waters list in 2010.

Problem

Highland Lake, a 623-acre lake in the towns of Windham and Falmouth and near Portland, Maine, attracts homeowners, boaters and anglers with its eight miles of scenic shoreland and warm and cold-water fisheries. The lake has a watershed area of 8.4 square miles and a mean depth of 25 feet. There are about 900 homes in the watershed, including about 300 homes along its developed shoreline. The lake's hand-carry public boat launch makes it an accessible and popular destination for visitors.

Beginning in the 1980s, erosion became more prevalent in the Highland Lake watershed due to changes in land use, especially the conversion of forest to developed land. These changes increased polluted runoff and caused a gradual decline in water quality. Stormwater runoff eroded soil from both the newly developed and existing developed lands, and moved sediment with attached phosphorus into the streams flowing to the lake. Excess phosphorus "fertilized" the lake, causing an increase in trophic state (biological productivity) followed by reduced water clarity and dissolved oxygen.

Maine's water quality standards require that lakes have a stable or decreasing trophic state, subject only to natural fluctuations. In Maine, a lake's trophic state is based on measures of chlorophyll *a*, Secchi disk transparency (clarity), concentration of dissolved oxygen and total phosphorus concentration.



Figure 1. Homeowners and volunteers planted over 1000 shrubs, trees and groundcovers to reduce polluted runoff.

Average annual Secchi disk transparency readings (measures of water clarity) in Highland Lake during the 1990s were about one meter less than during the 1980s due to increased algae and sediment. Dissolved oxygen levels deep in the lake declined, threatening the lake's brown trout fishery. In 1990 Maine DEP designated Highland Lake as impaired for aquatic life support on Maine's CWA section 303(d) list.

The total maximum daily load (TMDL) assessment developed for Highland Lake in 2003 identified suburban residential properties as the largest source (60 percent) of phosphorus. Highly developed shoreland areas with numerous homes and networks of gravel-surface roads increased stormwater runoff and erosion. Private roads accounted for nearly half of the water quality impact sites (42 percent). The TMDL estimated that the annual external loading of phosphorus needed to be reduced by about 24 percent to attain state water quality standards.

Project Highlights

In 1997, outreach to landowners began with a watershed survey that documented 104 erosion sites including private camp roads, town roads and residential properties. The Highland Lake Watershed Management Plan (1999) described actions needed to restore the lake. From 1999 to 2010, best management practices (BMPs) were installed at numerous erosion sites. Cost share agreements with public and private landowners resulted in BMPs being installed at priority nonpoint source sites on 42 private and public roads to stop excessive erosion and sediment from thousands of feet of gravel surface roads. A residential matching grant program prompted 51 landowners to install erosion control practices including plantings, waterbars, infiltration steps, rain gardens and riprap (see Figure 1).

Technical staff provided assistance to landowners during more than 300 site visits. The Highland Lake Youth Conservation Corps (YCC) installed BMPs on 176 sites in the watershed and generated remarkable community interest in reducing polluted runoff to the lake. Landowners learned how to care for their lake through extensive outreach efforts, including: camp road, septic system and raingarden workshops; Highland Lake Association newsletters and Web site; *Cruise the Buffers* boat rides, which toured examples of good and poor lake shore buffers; a *Guide to Living Responsibly in the Highland Lake Watershed*; watershed boundary signs; annual *State of the Lake* meetings; and a watershed forum for the community to plan for the lake's future.

Results

After 13 years of restoration projects, including installing erosion control practices, the amount of sediment and phosphorus exported to Highland Lake has declined significantly. Through 2009, pollutant loading was reduced by an estimated 278 tons of sediment and 1,070 pounds of phosphorus per year. After declining significantly from 1980 to 1998, water clarity stabilized (Figure 2) as watershed partners implemented erosion control efforts. The water quality data trend from 1998 through 2009 indicates a persistent stabilization of trophic state, and now Highland Lake meets Maine's water quality standards. As a result, Maine DEP removed Highland Lake from its 2010 CWA section 303(d) list of impaired waters.

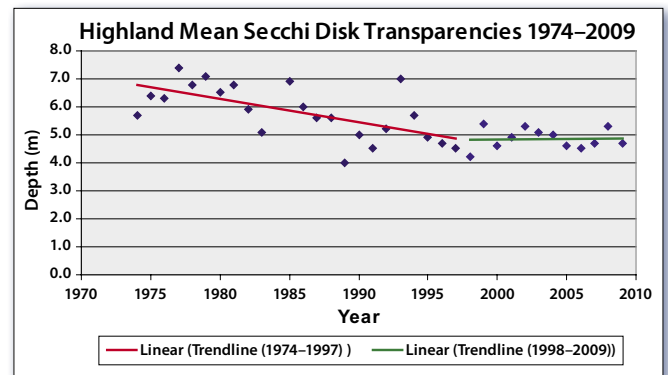


Figure 2. Highland Lake Mean Secchi Disk Transparencies from 1974 to 2009. Annual mean depth readings from 1974 to 1998 indicate a trend (red line) toward reduced water clarity. Secchi readings from 1998 to 2009 indicate a trend (green line) toward stable water clarity.

Partners and Funding

Cumberland County Soil and Water Conservation District (CCSWCD) and the Highland Lake Association (HLA) collaborated to raise awareness about the impacts of polluted runoff and to help the community implement erosion and sediment control practices. CCSWCD prepared a watershed management plan and provided extensive technical assistance, outreach services, grants administration and projects management. HLA advocated for the lake, persuading landowners and neighborhoods to do erosion control work and supporting development and funding of the YCC. The towns of Falmouth and Windham provided substantial YCC operational funds. Other key partners included Maine DEP, Maine Department of Transportation, Casco Bay Estuary Partnership and the U.S. Environmental Protection Agency (EPA).

From 1999 to 2010, partners used approximately \$970,000 to install erosion control practices at polluted runoff sites in the watershed. An EPA CWA section 604(b) grant (\$10,500) funded the watershed survey. In 1999 Maine DEP provided \$206,975 in state bond funds for a priority watershed project that fueled the start-up of work in the watershed. From 2004 to 2010, EPA provided \$339,865 in CWA section 319 grant funds for two watershed implementation projects (Phases 2 and 3). The three grants attracted local matching contributions exceeding \$380,000 from landowners, the towns of Windham and Falmouth and the HLA. Lake Stormwater Compensation Funds through Maine DEP also provided \$36,033.



U.S. Environmental Protection Agency
Office of Water
Washington, DC

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For additional information contact:

Donald Kale
Maine Department of Environmental Protection
207-822-6300 • donald.kale@maine.gov

Betty Williams
Cumberland County Soil and Water Conservation
District
207-892-4700 • betty-williams@cumberlandswcd.org