Crescent Lake NPS Watershed Protection Project

#2011RR03

Waterbody Name: Crescent Lake

Location: Raymond and Casco - Cumberland County

Waterbody Status: NPS Priority Watersheds, Most At Risk

Project Grantee: Town of Raymond

Project Duration: April 2011 – December 2013

319 Grant Amount: \$79,133

Local Match: \$238,217

Crescent Lake Watershed Casco Raymond 0 0.5 1 1.5 2 Miles

PROBLEM:

Crescent Lake covers 716 acres and has a direct watershed of 6.1 square miles. Several smaller lakes flow into Crescent Lake which then flows into Panther Pond and Sebago Lake, a public drinking water source for over 45,000 households in Southern Maine. Crescent Lake is developed with over 290 seasonal and year-round homes, a commercial campground, several private youth camps, two public beaches, one formal boat access and an extensive network of private unpaved camp roads.

The Maine DEP and Raymond Waterways Protective Association (RWPA) have monitored Crescent Lake's water quality since 1974. Water quality is considered above average, however there is significant depletion of dissolved oxygen in the hypolimnion in late summer. The Raymond Conservation Commission spearheaded a watershed survey in 2000, and the Raymond Pond and Crescent Lake BMP Demonstration Project (#2001R-03) addressed 13 NPS sites and provided technical assistance to 12 landowners in the watershed. The Crescent Lake Watershed Association (CLWA) formed in 2009 to promote lake protection. CLWA also joined the Maine Lake Society's LakeSmart program in 2009, and 14 full awards have since been issued to lake-friendly properties on Crescent Lake.

PROJECT DESCRIPTION:

The project's purpose was to significantly reduce erosion and export of sediment and phosphorus to Crescent Lake. In 2009, project staff and volunteers visited sites from the 2000 watershed survey and identified 70 priority areas. The project installed conservation practices at 21 of these priority sites and provided small matching grants to address problems at another 11 residential properties. A NPS Site Tracker was created to catalog NPS sites and projects. Project outreach activities included presentations at the CLWA's annual meetings; three hands-on workshops; targeted mailings to landowners with identified NPS sites; and a final brochure and tour highlighting project activities.



Many projects around the lake were completed with help from CLWA Board members and local residents.

PROJECT OUTCOMES:

- The project fixed 21 of the priority erosion problems in the watershed reducing pollutant loading to Crescent Lake by an estimated 25 tons of sediment and 22 lbs of phosphorus per year (Region 5 Method and WEPP Model). Another 11 residential sites were addressed through a small matching grants program.
- The Town of Casco replaced undersized culverts on Edwards Road with three large concrete box culverts to address chronic road washouts, improve fish passage, and improve public safety. The CLWA funded preliminary engineering work and the Town contributed over \$165,000 in match.
- The project successfully engaged several of the lake's summer camps. Project staff provided technical assistance to two camps and completed a series of projects at Camp Laurel South, which experienced severe erosion on its steep beach access. A 200' long drainage swale was constructed to intercept and divert runoff; plants were installed at the top of the beach area; a rain garden was installed; and bare soil was covered with erosion control mulch. Work was completed with \$7,436 in grant funding and \$12,571 in match.
- The 2000 watershed survey was updated, and 70 NPS sites were documented. A NPS Site Tracker was created to document and track site conditions over time. This information was used to develop the *Crescent Lake Watershed-based Protection Plan* (2013) and apply for a second 319 grant. The Town of Raymond was awarded a 319 grant for a Phase II project, which will begin in 2014.





After completing work through the project, three property owners (including the one shown above) received LakeSmart awards, which recognize lake-friendly properties.

PROJECT PARTNERS:

Crescent Lake Watershed Association Raymond Waterways Protective Association Town of Raymond FB Environmental Associates Town of Casco

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