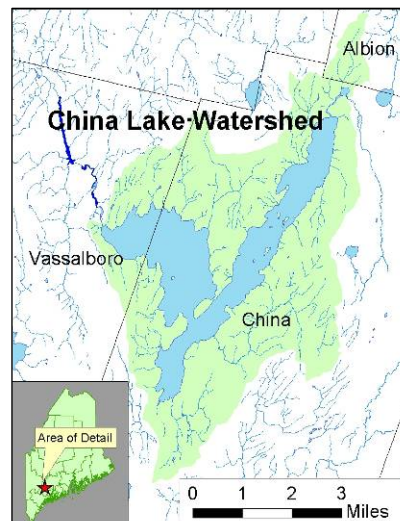


China Lake NPS Reduction Project

#2003R-37

Waterbody Name: China Lake
Location: China and Vassalboro – Kennebec County
Waterbody Status: Impaired, NPS Priority Watershed, Most at Risk
Project Grantee: China Region Lakes Alliance
Project Duration: March 2006 – March 2008
319 Grant Amount: \$60,905
Local Match: \$165,852



PROBLEM:

China Lake was once a crystal clear waterbody well known for its cold water fishery of salmon and trout. In 1983 the lake suffered a rapid decline in water quality due to cultural eutrophication with the onset of seasonal nuisance algae blooms, loss of its cold water fishery and a decline in property values. The lake was subsequently placed on the State's list of impaired waters due to nonattainment of water quality standards. Overall, the water quality of China Lake has only slightly improved over the past decade, with intense blue-green nuisance algae blooms prevalent during most summers since the mid-1980s. The lake is the community and economic focal point for the Town of China and the public drinking water supply for the greater Waterville area. The lake has three public boat launches and is heavily used for recreation, boating, fishing and swimming.

China Lake covers 3,848 acres, and it has a 32 square mile watershed. According to the lake's TMDL report, which was completed in 2001, the primary sources of NPS pollution are nutrient enrichment and excess phosphorus loading from watershed soil erosion and internal phosphorus recycling. Major land uses contributing to the external phosphorus load in lakes include residential and commercially developed areas, roadways, agriculture and commercial forestry. The China Region Lakes Alliance (CRLA) and China Lake Association have carried out 319 grant projects and a summer Youth Conservation Corps (YCC) program that have installed hundreds of BMPs on watershed erosion sites.

PROJECT DESCRIPTION:

The project focused on reducing sediment and phosphorus loading to China Lake with the goal of improving water quality. Cost sharing assistance helped fix 23 high priority NPS sites. Watershed property consultations and technical assistance was provided to 91 landowners and site-specific recommendations encouraged landowners to adopt appropriate BMPs. Watershed stewardship was promoted through lake association meetings, summer boat tours (100 people attended), an Annual Lake Awareness Day involving 5th grade students and articles in the local newspapers and annual newsletters.



PROJECT OUTCOMES:

- Over \$195,000 was invested in on-the-ground construction of needed conservation practices. This greatly exceeded the planned amount of \$61,960.
- BMPs were installed to address high priority erosion sites on ten camp roads in the watershed. The CRLA's Youth Conservation Corps continued to help landowners install BMPs at many additional residential sites.
- Tarybelu Lane (3,500 feet) was substantially rebuilt to stabilize the road surface. Ditches, ditch turnouts directing runoff into buffers, and a stream crossing were installed in order to stop the chronic excessive erosion that was delivering sediment and phosphorus to China Lake. All 22 lot owners approved the work and each contributed \$5,000. In total, \$156,000 (319 grant, \$32,479; local match, \$123,521) was spend on these projects. See photos below.
- Technical assistance visits were provided to 91 property owners – far exceeding the project goal of 40 visits. These visits prompted many of the landowners to then install recommended BMPs.
- Pollutant loading to the lake from watershed sources was reduced by about 61 tons of sediment and 43 lbs of phosphorus per year (WEPP Model).



Tarybelu Lane – before construction, silt eroded from road and into lake tributary



Tarybelu Lane – construction in progress

PROJECT PARTNERS:

Town of China
Town of Vassalboro
Kennebec Water District
Kennebec County SWCD
CRLA Youth Conservation Corps
China Lake Association

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