

China Region Lakes Alliance Seasonal Work Report 2007



China Region Lakes Alliance

571 Lakeview Drive, China, Maine 04358

Tel: 207-445-5021 Fax: 207-445-3208

A Lake is the Product of its Watershed...And the People who Care for it

Our Mission: To protect and improve water quality in China Lake, Threecornered Pond, Threemile Pond and Webber Pond and to benefit our local economy through Integrated Watershed Management.

Members: China Lake Association, Threecornered Pond Association, Threemile Pond Association, Webber Pond Association, City of Augusta, Town of China, Town of Vassalboro, Town of Windsor, Kennebec Water District

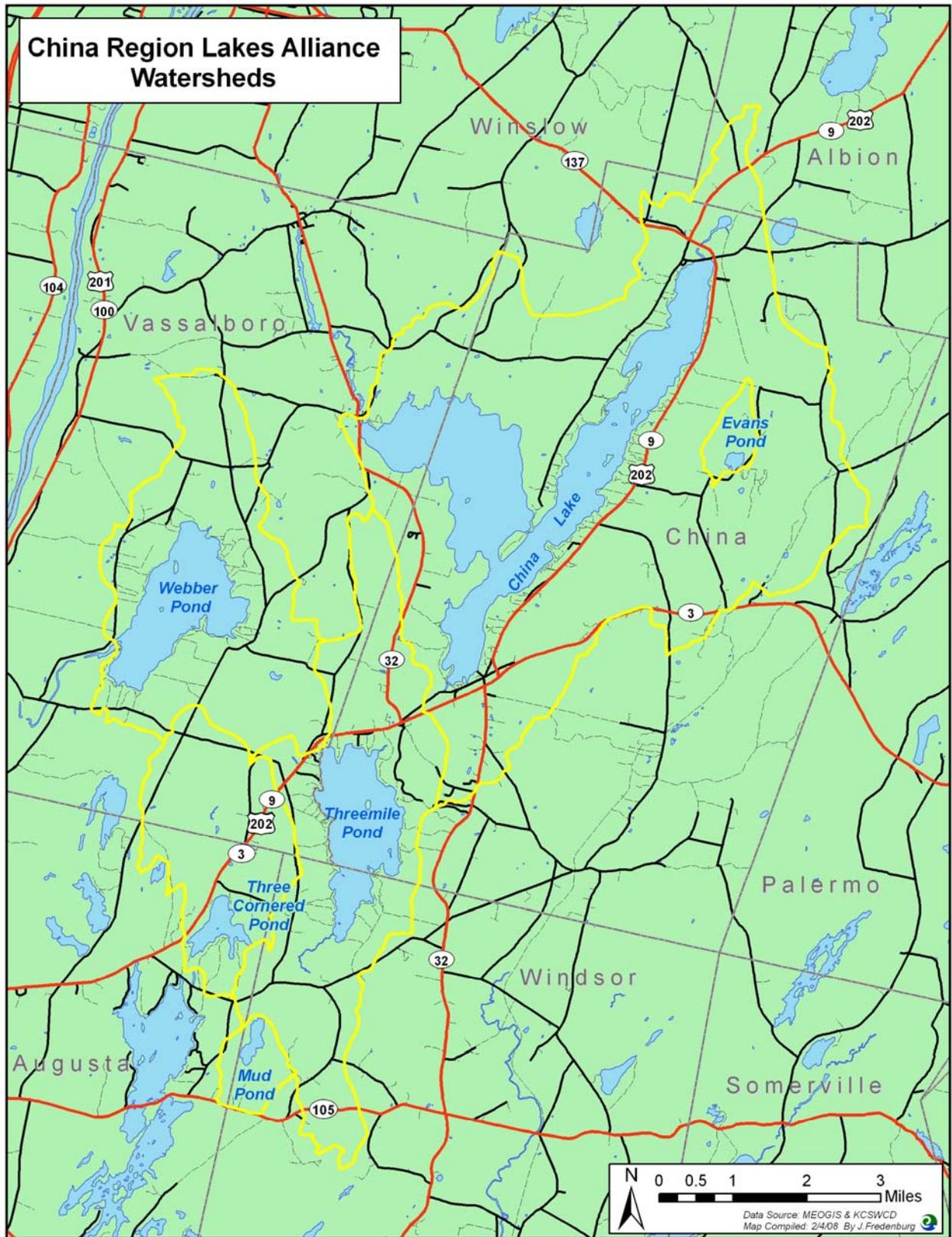
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-China Lake watershed
-Webber, Three Mile & Three Cornered Pond Watersheds



Introduction and Acknowledgements

The year 2007 was a milestone year for the CRLA. We were successful in completing the largest pollution control project ever done in the Town of China at a total cost of \$156,000. For many years it has been recognized that significant amounts of soil runoff from the Tarybelu Lane development was ending up in China Lake. The twenty-two lot development sits on a steep hillside in the east shore of China Lake and has a stream passing through the bottom of the development which empties into the lake. While the project met D.E.P. standards during of construction in 1987, time diminished the effectiveness of many of the pollution control measures that were originally installed. Residents of the development appreciated the problem the neighborhood was causing for the lake and also knew first hand the difficulties associated with living on a chronically eroding road. In the spring of 2007 the CRLA met with Tarybelu Lane residents with an offer of technical assistance and some funding if property owners would agree to fix the road surface, ditches, stream crossings, and turnouts in a manner that would lessen the soil runoff and therefore reduce phosphorus loading into the lake. The response was overwhelming. With 100% participation from property owners, \$110,000 was raised, plans were developed by our partners at the Kennebec County Soil and Water Conservation Department (KS&W), and a contractor was hired. The CRLA was able to use \$32,479 in state grant money and a portion of local funds to supplement the residents' share. Many of us held our breath as details were finalized between residents, contractors, and the D.E.P..

Project construction began in late July and every step was monitored by Jeff Freddenberg of the KS&W, advisor to the CRLA. By the end of August Tarybelu Lane had been transformed from a dusty, badly eroded road into a wonderfully paved, properly ditched roadway. While there are many to thank on this project we are indebted to the China Town Manager, Dan L'Heureux, for his constant oversight and many words of encouragement. As part of the grant reporting requirements we calculated that over 7 yards of gravel will no longer end up in China Lake annually from the Tarybelu site. Norm Marcotte, our grant supervisor at the D.E.P., toured the site at completion and called the Tarybelu Lane project, "...the single most significant 319 Grant project done in the State of Maine...". The Tarybelu project is an example of what can be done through cooperative efforts if a modest sum of town money is available. Out of the \$156,000 total less than \$11,000 was from local funds, quite a return on an investment!

Our ever present Youth Conservation Corp (YCC) did work on a wide variety of projects on the shorefronts and the watersheds of our member lakes China, Three Mile, Webber, and Three Cornered Pond. Over 50 property owner consults were done in addition to the plantings, culvert improvements, and rip rap projects. The idea of having local youth work on erosion control projects originated with the CRLA eighteen years ago. Now the YCC concept is used in nearly a dozen lakeside communities around the state including the Belgrade lakes area. If you have ever seen the students of the YCC at work lugging rocks and cleaning out culverts you know they earn their money.

We are fortunate to have Peter Wilkens as our YCC Director. Peter is an environmental science major at Wells College and is an absolutely tireless worker. Through the CRLA, Peter was instrumental in securing a grant for invasive aquatic species boat inspections at our boat landings on China and Three Mile Ponds. Every weekend this past summer we had boat inspectors out raising awareness regarding the risk of invasive plants to our lakes as they inspected boats for invasive plants prior to launch. We hope to expand the boat inspection program to Webber Pond next year.

The CRLA was extremely excited to learn that it has been awarded another 319 grant. The grant in the amount of \$108,000 will be used for ongoing erosion control work over the next two years. We were able to win this highly competitive grant because of the strong ongoing commitment from our member towns and organizations. Local money is needed to match state funds and because of this the annual money from participating towns and organizations is vital.

Looking ahead we have a number of projects in the works for 2008. The CRLA will also be working with the China Lake Association, Three Mile Pond Association, and Webber Pond Associations on a shorefront buffer strip improvement project. Free buffer strip improvement consults will be available as well as vouchers to allow land owners to buy discounted trees and plants for their buffer strip. The YCC will do the recommended planting and landscaping along the lake front buffer strip free of charge.

Residents having questions regarding possible erosion problems, buffer strip work, or cost sharing arrangements for road and culvert work are encouraged to contact the CRLA.

CRLA email lakesalliance@yahoo.com

Peter Wilkens above email or 207-660-5270

David Landry China Lake) david.landry@yahoo.com 968-2856

Kim Sweetser (Three Mile Pond) kimseth@fairpoint.net 445-5862

Bob Nadeau Webber Pond) nadeau1@adelphia.net 873-2025

Respectfully,
David Landry, President
CRLA

319 Projects

Projects funded by the State of Maine under the 319 Grant Program were done on China Lake, Three Mile Pond and Webber Pond. The CRLA did the 319 work on China Lake and the reports are included here. The 319 work on Three Mile Pond and Webber Pond was done by the Kennebec County Soil and Water Conservation District with input from the CRLA. Those reports are filed separately.

"The Landing" Bona/ Town of China	China Lake	China	6/18-6/27	Shoreline Erosion	1
"Bicentennial Nature Park" City of Augusta	3 Cornered Pond	Augusta	6/28-6/29	Multi-Organizational Cooperation	4, 6
Casey Road	3 Mile Pond	Windsor	7/2-7/6	Preliminary Work for Capital Project	2
Casey Road	3 Mile Pond	Windsor	7/9-7/11	Failing Road Ditch	3
Fire Road 15 Philbrook	China Lake	China	7/13-7/17	Shoreline Erosion	1
Tarybelu Lane	China Lake	China	7/18-7/23	Preliminary Work for Capital Project	1
Webber Dam Area Town of Vassalboro	Webber Pond	Vassalboro	7/24-	Water Management	3
Kelly	China Lake	China	7/25-7/26	Shoreline Erosion and Road Erosion	1,3
Horseneck Island	3 Mile Pond	Windsor	7/30-8/7	Island Erosion and Structure Failure	1,2,4,5,6

WORK CODES FOR MASTER LIST

Work type	work code
Shoreline Erosion Control	#1
Site Clean-Up	#2
BMP Installation	#3
Plantings	#4
Structure Removal	#5
Structure Maintenance	#6

Material:	Bona/ Town of China	City of Augusta	Casey Road	Casey Road	Philbrook	Tarybelu Lane	Webber Dam	Kelly
Permit (55\$ each)	55	0	0	0	55	55	55	55
Rip Rap Stone (12\$/Yard)	216	0	0	72	72	288	0	36
Geotextile (.55\$/foot)	0	0	0	27.5	16.5	0	0	0
Staples (.08\$ each)	0	0	0	12	0	0	0	0
Slope Stabilizing Mulch (17\$/yard)	0	0	0	272	0	0	0	0
Crushed Stone (17\$/yard)	0	0	0	0	0	0	0	0
Loam (13\$/yard)	0	0	0	0	0	0	0	0
Conservation Mix Seed (2\$/pound)	0	0	0	4	0	0	0	0
Hay Mulch (2\$/bale)	0	0	0	0	0	0	2	0
Total Material Cost (Dollars):	271	0	0	387.5	143.5	343	57	91
Paid by CRLA:	0	0	0	315.5	16.5	0	2	0
Paid by Landowner:	271	0	0	72	127	343	55	91

Project # 2003R-37

Del 5 Task 5

NPS Site Report

Maine NPS ("319") Grants Program

Date Submitted: 12/20/07

Project Sponsor: China Regional Lake Alliance

Sponsor Contact Person: Jim Hart, (207) 923-3358

DEP Project Manager: Norm Marcotte

Project #:2003R-37

Project Title: China Lake NPS Reduction Project

Site Location: Tarybelu Lane, China, Maine off Rt.202

Number of Sites: 14

Grant Cost: \$32,479.25 **Match Cost:** \$123,521 **Match Source:** Cash

Nonpoint Source Pollution Problems:

The road has surface erosion along, 3,500ft. of road, due to lack of road base and improper road materials, failing ditch's and no road crowning. This issue was loading the unnamed tributary to China Lake with sediment during the spring thaw and during significant rain events.

Practices Implemented:

The road was box cut for approx. 700' of roadway and installed geotextile fabric throughout the whole project area to stabilize road base.

Roadway crowned and surface & base gravel added to 3,500ft of roadway.

The eroded ditch locations were armored along with multiple ditch turnouts.

Loamed and seeded all disturbed areas.

Added and replaced failing culverts with armed inlets and outlets. To distribute channelized flows.

WEPP model inputs to determine sediment and P loads before and after treatment:

Before: Model #1 12, 443.71lbs, Model #2 5,203.07lbs, Model #3 20,530.80lbs, Model #4 3,857.03lbs, Model #5 8,558.38, Model #6 935.96 total=51,528.95

After: Model #1 34.56lbs, Model #2 103.21lbs, Model #3 0, Model #4 74.03, Model #5 53.12 Model #6 0 total=264.92 **Net reduction: 51,264.03lbs/25.63tons/18.30cy**

soil type: Silt Loam

% rock: 0-7%

surface: Gravel Surface

traffic: High

road gradient: 4%

road length: 3,500'

road width: 18'-35'

fill gradient: 3%

fill length: 300

Buffer gradient: 2-8%

Buffer length:0-50'

Precipitation: 42.99 inches

Rain runoff: .06"

Feet of shoreline or stream bank treated (if applicable):
Area of ground treated (sq. ft.): 92,750sq.ft.

Technical Assistance included, two meeting with landowners, one to go over the site and the second to explain the design and cost share. We also had set visit with the contractor & MDEP, town of China & CRLA. There was multiple site visits during the construction to include product testing and spot elevation checks.

Operation & Maintenance Plan:

Landowner was instructed in the following practices for maintaining the BMP:

After each Significant Rainfall (over 1"/hour), Storm Event and Spring Runoff each year, the following shall be done:

Road crossings, culverts, turnouts and ditches will be checked for erosion and/or debris build up.

If any erosion has occurred, it will be fixed with a suitable material.

Any debris that has accumulated will be removed.

Road shoulders will be checked for erosion and re-graded as necessary.

Routine Maintenance to be Performed annually:

Culverts, turnouts and ditches will be checked for erosion or other damage and repaired if needed.

All turnouts and ditches will be inspected and repaired after road re-grading.

Maintenance of Stone Buffers (rip-rap): no weeding is necessary – buffer will improve as it is naturally vegetated. If a significant number of stones become dislodged, e.g., from ice scouring, contact KCSWCD for assistance.

Landowner was notified that the agreed Plan of Operation and Maintenance shall remain in effect for a period of ten years from implementation of conservation practices. The Landowner/ Representative will be responsible for maintaining the BMPs for the life of the practices, which is expected to be longer than 10 years.

Monitoring/Evaluation:

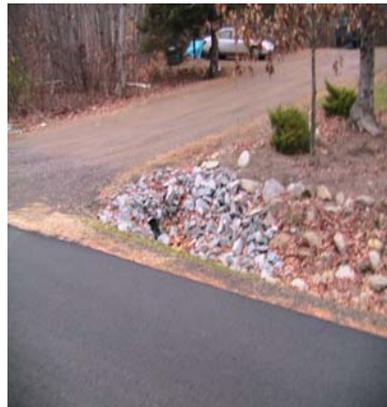
At the CRLA discretion, the Owner/Representative and a representative from CRLA will jointly conduct an O&M inspection of the work conducted under this Agreement once a year for the first three years after implementation of the management practices installed under that contract.

Site Photographs:

BEFORE:



AFTER:



Project # 2003R-37 Del 5 Task 5

NPS Site Report

Maine NPS ("319") Grants Program

Date Submitted: 12/20/07

Project Sponsor: China Regional Lake Alliance

Sponsor Contact Person: Jim Hart, (207) 923-3358

DEP Project Manager: Norm Marcotte

Project #:2003R-37

Project Title: China Lake NPS Reduction Project

Site Location: Fire Road 18, China Lake, Maine

Number of Sites: 1

Grant Cost: \$1,000

Match Cost: \$1,200

Match Source: Cash

Nonpoint Source Pollution Problems:

The existing boat launch has surface erosion along 60ft. of the access way, due to lack of access base and improper materials. This issue was loading China Lake with sediment during significant rain events.

Practices Implemented:

The gravel launch was eliminated. Check dams was installed along the 60' stretch and rip-rap was installed in between the check dams

WEPP model inputs to determine sediment and P loads before and after treatment:

Before: 60.02lbs

After: 7.68lbs

Net reduction: 52.34lbs

soil type: Sandy Loam
% rock: 0%
surface: Gravel Surface
traffic: low
road gradient: 4%
road length: 60'
road width: 20'

fill gradient: 1%
fill length: 0
Buffer gradient: 4%
Buffer length:0-50'
Precipitation: 42.99 inches
Rain runoff: .06"

Feet of shoreline or stream bank treated (if applicable):

Area of ground treated (sq. ft.): 1,200sq.ft.

Technical Assistance included, one meeting with landowners, one to go over the site and the second to explain the design and cost share. We also had set visit with the contractor & MDEP, town of China & CRLA and engineering consultant.

Operation & Maintenance Plan:

Landowner was instructed in the following practices for maintaining the BMP:

After each Significant Rainfall (over 1”/hour), Storm Event and Spring Runoff each year, the following shall be done:

Road crossings, culverts, turnouts and ditches will be checked for erosion and/or debris build up.

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Culverts, turnouts and ditches will be checked for erosion or other damage and repaired if needed.

All turnouts and ditches will be inspected and repaired after road re-grading.

Maintenance of Stone Buffers (rip-rap): no weeding is necessary – buffer will improve as it is naturally vegetated. If a significant number of stones become dislodged, e.g., from ice scouring, contact KCSWCD for assistance.

Landowner was notified that the agreed Plan of Operation and Maintenance shall remain in effect for a period of ten years from implementation of conservation practices. The Landowner/ Representative will be responsible for maintaining the BMPs for the life of the practices, which is expected to be longer than 10 years.

Monitoring/Evaluation:

At the CRLA discretion, the Owner/Representative and a representative from CRLA will jointly conduct an O&M inspection of the work conducted under this Agreement once a year for the first three years after implementation of the management practices installed under that contract.

Site Photographs:

BEFORE:



AFTER:



Pollutants Controlled Report
 Maine Department of Environmental Protection
 NPS Grants Program - Bureau of Land and Water Quality

YEAR: 2007

NPS Project ID#: 2003R-37 Project Title: China Lake NPS Reduction Project

Grantee: Kennebec SWCD DEP Agreement Admin: Norm Marcotte

TABLE 1. Pollutant Load Reduction Estimates for NPS Sites Treated with BMPs

Water Body Name	Sediment tons per year	Phosphorus pounds per year	Nitrogen pounds per year
China Lake	25.66	25.66	51.32
Totals	25.66	25.66	51.32

TABLE 2. Wetlands, Streambanks, Shoreline Protected / Restored During This Project

Resource	Planned acres	Actual acres	Planned lineal feet	Actual lineal feet
Wetlands restored			not applicable	not applicable
Wetlands created			not applicable	not applicable
Streambank /shoreline protected	not applicable	not applicable		60
Stream channel stabi- lized	not applicable	not applicable		

The estimations in this report were determined using the appropriate estimation model(s) and applied according to the procedures prescribed for the model. To the best of my knowledge these are reasonable estimates using appropriate documentation. Documentation is kept on file by the grantee and is available for review by DEP / EPA.

Submitted by (for Grantee): s/JBlais John Blais on 12/21/07
Signature Printed Name

Reviewed by (for DEP): _____ on ___/___/___
Signature Printed Name

<p>Pollutants Controlled Report Maine Department of Environmental Protection NPS Grants Program - Bureau of Land and Water Quality</p>

NPS Project ID#: 2003R-37, for the year 2007

TABLE 3. List of NPS Sites and Methods Used

Site ID (name or # from site list)	Brief Description NPS Site	Estimation Method / Sub- Method Used	Tons of Sediment This Year	Pounds of Phos- phorus This Year	Pounds of Nitro- gen This Year
Tarybelu Lane	Failing culverts, ditch and no crown on roadway. Installed new culverts with armoring on both inlets and outlets, added parabolic swale with rip-rap and ditch turn-outs to limit sediment entering into a tributary that feeds into China Lake.	WEPP	25.63	25.63	51.26
Fire Road 18	Boat ramp with severe rutting and sediment entering the lake on every rain event. Installed rip-rap and rock check dams.	WEPP	.03	.03	.06
Totals for the Year:			25.66	25.66	51.32

Pollutant Load Reduction Estimation Methods

1. Region 5 Model Refer to EPA website <http://it.tetrattech-ffx.com/step/> Go to the Region 5 Load Estimation Users Manual, "Michigan Method".

Descriptors to use for Region 5 Model sub-methods:

R5 / GEE	Gulley Stabilization - uses Gulley Erosion Equation
R5 / CEE	Streambank / Ditchbank and Roadbank Stabilization - uses Channel Erosion Equation
R5 / Fields	Agricultural Fields - uses Revised Universal Soil Loss Equation (RUSLE), sediment delivery ratio and contributing drainage area.
R5 / Filter	Filter Strips - uses relative gross filter strip effectiveness
R5 / Feed-lot	Feedlot Pollution Reduction - uses a 12 step method

2. WEPP Model. Refer to USFS website <http://forest.moscowfsl.wsu.edu/fswepp/> Water Erosion Prediction Project (WEPP) computer model

Youth Conservation Corp Projects

These projects are smaller projects and are done with our YCC and design assistance from DEP and the KCSWCD./ The materials are paid for by the property owner with labor provided by the YCC funded by the CRLA



Lake Name: China Lake

Landowner: Tom Bona/Town of China

Job Location: Corner of the Causeway and Route 202/9 Lakeview Drive in China

Reason for Work: Eroding banks due to wave action and heavy human traffic; has been a project priority for some time now.

Work Completed: Employees cleared debris and flotsam from the shore and installed two major “best management practices” (BMPs), an erosion control step to funnel traffic and rip-rap along the shoreline.

Labor Cost (Dollars):
2614.50

Material Cost (Dollars):
271

Total Cost (Labor+ Material):
2885.50



Lake Name: Three Cornered Pond

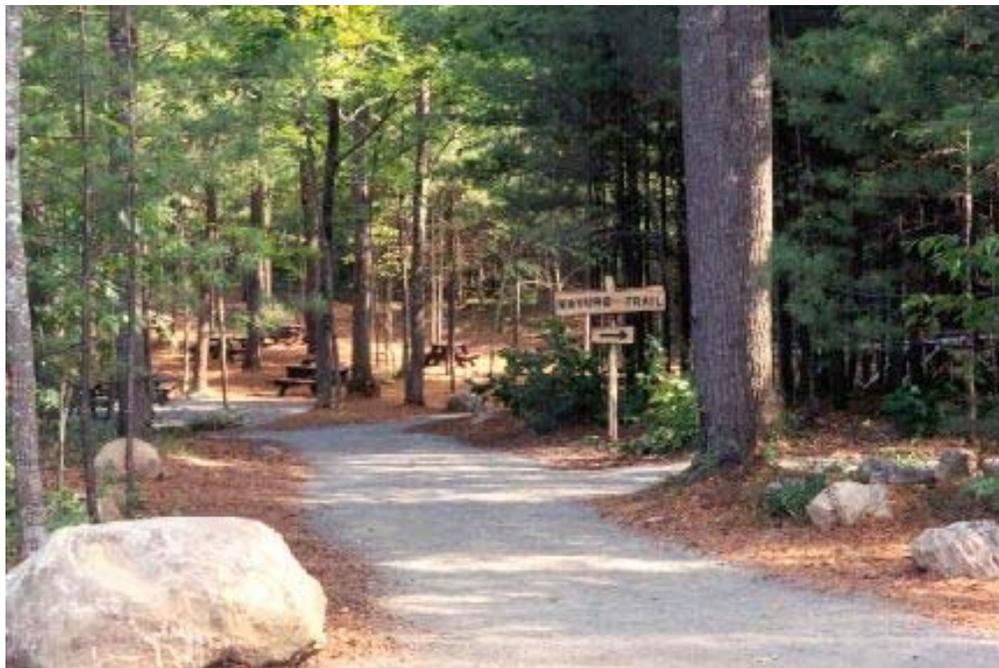
Landowner: Bicentennial Nature Park – City of Augusta

Job Location: Off of Route Three in Augusta

Reason for Work: Collaboration between organizations and a continuing need for erosion control BMP maintenance and installation from heavy use.

Work Completed: Employees maintained and healed to install new BMPs in the form of water bars, a french drain, pathway borders, and path covering.

Labor Cost (Dollars):	Material Cost (Dollars):	Total Cost (Labor+Material):
666	0	666



Lake Name: Three Mile Pond

Landowner: Casey Road Association

Job Location: Off of Legion Park road in Windsor

Reason for Work: Brush had grown too far into the road that prevented any further work on a major capital project that would raise the causeway section that flooded out in the spring months. A ditch at the top of the road was also failing and had to be dug out and lined with stone to prevent further degradation of the road and the surrounding wetlands.

Work Completed: Employees cleared back the offending brush so the contractors could continue work, reshaped the ditch at the top of the road, and filled the ditch with stone to prevent erosion and to slow water coursing through it.

Labor Cost (Dollars):	Material Cost (Dollars):	Total Cost (Labor+ Material):
2054.05	387.50	2885.5



Lake Name: China Lake

Landowner: Philbrook

Job Location: Fire Road 15 off of China Neck Road in China

Reason for Work: Wave and ice in conjunction with fast-moving ground water had rendered previous rip-rap ineffectual so new rip-rap was put in with a proper baseline to hold it, minor planting was also needed.

Work Completed: Employees installed new rip-rap to fill undercuts in the high bank and established a proper baseline to hold the rip-rap against the ice, waves, and groundwater. Existing plants were tended to try and establish a better root system in the bank.

Labor Cost (Dollars):	Material Cost (Dollars):	Total Cost (Labor+ Material):
666	143.5	809.5



Lake Name: Webber Pond

Landowner: Town of Vassalboro

Job Location: Webber Damn Road in Vassalboro

Reason for Work: Water off of road and parking area had caused erosion into Seven Mile Stream and led to higher costs in maintenance.

Work Completed: Employees installed drainage ditches to take the sheeting water and funnel it into a grassy buffer zone as well as seeded and mulched exposed soils to better protect the surrounding area from erosion.

Labor Cost (Dollars):	Material Cost (Dollars):	Total Cost (Labor+ Material):
333	57	390



Lake Name: China Lake

Landowner: David Kelly

Job Location: Fire Road 43 off of Route 202/9 Lakeview Drive in China

Reason for Work: Heavy water erosion on steep road with drainage ditches in need of repair as well as shoreline erosion further down the slope.

Work Completed: Employees installed french drains in the road to lessen water velocity and volume and installed rip-rap along the shoreline to combat wave action erosion.

Labor Cost (Dollars):
210

Material Cost (Dollars):
91

**Total Cost (Labor+
Material):**
251



Lake Name: Three Mile Pond

Landowner: Dave Graber

Job Location: Horseneck Island off of Park Lane in Windsor

Reason for Work: Heavy erosion and slumping of inner areas on the island. Also there were exposed roots above the existing rip-rap and a small outbuilding in need of removal.

Work Completed: Employees repaired the rip-rap and planted some small trees and bushes. The ruined outbuilding was removed and in the area where the soil was eroding away in the center of the island, fine-grained erosion control mulch was placed again with plantings.

Labor Cost (Dollars):	Material Cost (Dollars):	Total Cost (Labor+ Material):
1608.75	173.5	1780.75



Lake Name: China Lake
Landowner: Edna Longley
Job Location: Fire Road 22 off of Route 202/9 Lakeview Drive in China
Reason for Work: Eroding road and stream banks, bare soil that required vegetation.
Work Completed: Employees installed a road ditch that ended in a rock filled collection pool and fed water to a heavy wooded buffer. The eroding banks were shored up with existing stone and vegetated.

Labor Cost (Dollars):	Material Cost (Dollars):	Total Cost (Labor+Material):
1096.87	88.5	1185.37



Lake Name: Three Mile Pond
Landowner: Maine State Department of Transportation
Job Location: Juncture of Route 201 and Route 3 in China
Reason for Work: Eroding road bed, clogged culverts and insufficient vegetation.
Work Completed: Employees cleaned out the culverts, vegetated area, and funneled some water to a buffer zone.

	Labor Cost (Dollars):	Material Cost (Dollars):	Total Cost (Labor+Material):
NO PICTURE	211.5	51	262.5

Lake Name: Three Mile Pond

Landowner: The Bartletts

Job Location: Park Lane in Vassalboro

Reason for Work: Massive water coming down steep driveway slope causing erosion across property as well as bank erosion.

Work Completed: Employees, as part of a larger collaborative project with the Kennebec Soil and Water Conservation District, plated a buffer zone and stabilized the shoreline to allow further work to continue on the driveway.

Labor Cost (Dollars):	Material Cost (Dollars):	Total Cost (Labor+ Material):
334.87	142	476.87



Landowner Consultation

Landowner consultations are done free of charge by the CRLA and involve a broad range of topics including camp road maintenance, buffer strip improvement and shorefront erosion control. These consultations many times lead to work projects for current or future years.

The following two pages reproduce a report focused on the major construction work done by the CRLA during 2007 through the use of its volunteers, staff and consultants.

That is followed by a list of all the 2007 landowner consultations.

That brief overview is followed by a list of priority Sites for future conservation work by CRLA and other Conservation Partners

China Region Lakes Alliance

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Tarybelu Lane under construction

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A completed Tarybelu Lane

part of the grant reporting requirements, we calculated that over 7 yards of gravel will no longer end up in China Lake annually from the Tarybelu site. Norm Marcotte, our grant supervisor at the D.E.P., toured the site at completion and called the Tarybelu Lane project, "the single most significant 319 Grant project done in the State of Maine." The Tarybelu project is an example of what can be done through cooperative efforts if a modest sum of town money is available. Out of the \$156,000 total cost, less than \$11,000 was from local funds. Quite a return on an investment!

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Residents having questions regarding possible erosion problems, buffer strip work, or cost sharing arrangements for road and culvert work are encouraged to contact the CRLA.

CRLA lakesalliance@yahoo.com
 Peter Wilkens lakesalliance@yahoo.com or 207-660-5270
 David Landry (China Lake) david.landry@yahoo.com 968-2856
 Kim Sweetser (Three Mile Pond) kimseth@fairpoint.net 445-5862

Respectfully submitted,
 David Landry, President
 CRLA



Thank you to the 2007 Conservation Corp for a job well done!!

Peter Wilkens-Corp Leader

Lydia Kilian	Nikki Busmanis
Steven Fletcher	Rachel Krummel
Jeffrey Lees	Ericka Malley
Christina Porter	Colby Sylvain
Christian Wilkens	



China Region Lakes Alliance Project Consultations

Property Location:	Owner Name:	Watershed:	Municipality:	Project Status:
Lakeview Drive	Thorne, Edna	China Lake	China	Pending
146 Park Lane	Vanknowe, James	3 Mile	Vassalboro	Pending
FR #36	Theriault, Colette	China Lake	China	Pending
FR #20	Sckora, Larry	China Lake	China	Pending
FR #75	Pilegi	3 Mile	China	Pending
25 Plummer Road	Armstrong, Peter & Plummer, Jim	3 Mile	China	Pending
FR #41	Bailey, Alan & Caroline	China Lake	China	Pending
Landing Restaurant	Bonna, Tom & Town of China	China Lake	China	Complete
Casey Road	Breton, Paul	3 Mile	Windsor	Pending
FR #43	Kelly, David	China Lake	China	Complete
FR #15	Philbrook, Roxanne	China Lake	China	Complete
Horseneck Island	Graber, David & Arlene	3 Mile	Windsor	Complete
FR #61A	Wilson, Don	China Lake	China	Pending
70 Windsor Road	LaVallee, Mark	Un-named stream	China	Complete
FR #14	Clair, Jenny (Common lot)	China Lake	China	Pending
Park Lane	Whittaker, Tom	3 Mile	China	Pending
FR #12	Fullerton, Ted	China Lake	China	Pending
147 Park Lane	Hayden, Rick	3 Mile	China	Pending
Lone Indian Trail	Norris, Gary & Kerr, Lee	3 Cornered Pond	Augusta	Pending
Tilton Lane	Smith, Barbara	Webber Pond	Vassalboro	Pending
FR #61	Phillips, Doug	China Lake	China	Pending
FR #22	Longley, Edna	China Lake	China	Complete
Cunningham Road	Gunning, George	3 Mile	Windsor	Pending
FR #43	Stebbins/Ayer	China Lake	China	Pending
104 Lone Indian Trail	Goldey, Anya & Allen	3 Cornered Pond	Augusta	Pending
583 Oak Grove Rd	Cassidy, Jim & Becky	China Lake	Vassalboro	Pending
Bicentennial Nature Park	City of Augusta	3 Cornered Pond	Augusta	Complete/Pending
FR #32	FR #32 Residents	China Lake	China	Pending
Pleasant Point Road	Pleasant Point Association	Webber Pond	Vassalboro	Pending
Merck Lane	Merck Shipping Corporation	3 Mile Pond	China	Pending
Rte 32 and Rte. 3	DOT	3 Mile Pond	China	Complete
Tarybelu Lane	Tarybelu Lane Road Association	China Lake	China	Complete
Tony's Way	Tony's Way Residents	Webber Pond	Vassalboro	Pending
Tardif Lane	Tardif Lane Residents	Webber Pond	Vassalboro	Pending

List of Priority Sites for future conservation work by CRLA and other Conservation Partners

Property Location	Owner Name	Summary of Desired Work	Contact Date	319 or YCC Project	Permit Required?	Urgency	Waterbody	Municipality
Lakeview Drive	Thorne, Edna	Remove failing retaining wall. Install riprap shoreline. Install 3-tier buffer and install catch pool and rock-lined drainage ditch from culvert.		YCC & CRLA 319	Yes	No A	China Lake	China
FR #75	Pilegi,	Crown 500' of camp road. Place filter fabric and possible repair spur roads.			No	No	3 Mile	China
146 Park Lane	Vanknowe, James							
FR #36	Theriault, Colette	Control erosion on roadway and adjacent land.						
FR #20	Skora, Larry	Culvert being washed out and drainage problem						
225 Plummer Road	Armstrong, Peter & Plummer, Jim							
FR #41	Bailey, Alan & Caroline	Fix improper riprap and control erosion by placing base rocks.		YCC	Yes	No B	China Lake	China
Landing Restaurant	Bonna, Tom & Town of China	Riprap shoreline 200'. Install infiltration steps.		YCC	Yes	Yes A	China Lake	China
Casey Road	Breton, Paul	Remove brush along 500' of roadway. Create 350' of ditching and add 36 yds of gravel. Seed and mulch.	6/27/2007	YCC & 319	No	No A	3 Mile	Windsor
FR #43	Kelly, David	Install 2 water diversion BMPs in steep driveway, aimed into buffer. Hard place riprap along 30' shoreline		YCC	Yes	Yes A	China Lake	China
FR #15	Philbrook, Roxanne	Place erosion control mulch to cover exposed tree roots. Hand place riprap stone along eroded bank.		YCC	Yes	Yes B	China Lake	China
Webber Dam Rd.	Town of Vassalboro	Create ditching alongside of road to prevent sediment movement to water body. Armor shoreline to prevent erosion.		YCC	Yes	Yes A	Webber Pond	Vassalboro

List of Priority Sites for future conservation work by CRLA and other Conservation Partners

Property Location	Owner Name	Summary of Desired Work	Contact Date	319 or YCC Project	Permit Required?	Obtain Gen ed?	Waterbody	Municipality
Horseneck Island	Graber, David & Arlene	Reinforce revetment on south side of island and fill with erosion control mulch. Plant vegetation in buffer zone. Remove tipped shed.	YCC & 319	No	No	A	3 Mile	Windsor
FR #61A	Wilson, Don	Add riprap stone along existing shorefront for 35' and install infiltration steps no wider than 4' with stone blocks	Consulting	Yes	Yes	B	China Lake	China
FR #14	Clair, Jenny (Common Lot)	Reinforce existing natural stone with riprap stone to prevent continued erosion. Place filter fabric on bare soil and stone in front of bare soil and fill in gaps between existing stone with gravel.	YCC	Yes	No	B	China Lake	China
Park Lane	Whittaker, Tom	Add gravel to 765' of roadway. Lower culvert as needed	319/Art Grindle	Yes	No	A	3 Mile	China
FR #12	Fullerton, Ted	Place erosion control mulch to cover exposed tree roots on north side.	5/31/2007 YCC	No	No	B	China Lake	China
Kilburn Road	Kilburn, Ron						Owner unavailable.	
70 Windsor Road	LaVallee, Mark	Construct 24X30' garage within protected zone. Install engineered buffer to protect stream.	7/13/2007 Consulting	Yes	Yes	A	Un-named stream	China
147 Park Lane	Hayden, Rick	Terracing	YCC	Yes	No	B	3 Mile	China
Lone Indian Trail	Norris, Gary & Kerr, Lee	Riprap eroding shoreline 250' feet. Install buffer on two adjoining properties.	YCC & 319/Art Grindle	Yes	No	A	3 Cornered Pond	Augusta
Tilton Lane	Smith, Barbara	Number of small projects aimed at mitigating erosion.	6/4/2007 YCC	Yes	No	B	Webber Pond	Vassalboro
FR #61	Phillips, Doug	Dig 2' wide by 2' deep trench from driveway to camp and fill with crushed stone trench. Will empty into 3' deep hole filled with crushed stone and will divert stormwater.	YCC	Yes	No	B	China Lake	China

List of Priority Sites for future conservation work by CRLA and other Conservation Partners

Property Location	Owner Name	Summary of Desired Work	Contact Date	319 or YCC Project	Require d? ed? cy Status	Waterbody	Municipality
FR #22	Longley, Edna	Dig diversion ditch and install collection pool.		YCC	No Meeting 8/9/07	China Lake	China
Cunningham Road	Gunning, George	Install filter fabric along 800' road. Properly crown road and install several BMPs.	8/2/2007	319/Art Grindle	No 319 cost-share pending	3 Mile	Windsor
FR #43	Stebbins/Ayer	Stabilize bank with vegetation and re-establish ditch on easterly side. Crown road and add water bars		YCC & 319 CRLA	Yes No Board decision A-1 unknown	China Lake	China
104 Lone Indian Trail	Goldey, Anya & Allen	Riprap to prevent further shoreline erosion.		YCC	Yes Yes B Owners put on hold. Pond	3 Cornered Pond	Augusta
Bicentennial Nature Park	Cassidy, Jim & Becky	Remove junk yard from swamp		CRLA 319 Project	No No Board decision B unknown	unknown	Vassalboro
FR #32	City of Augusta	Repair and clear out nature trails. Install water bars and replace stones.		YCC	No No Completed	3 Cornered Pond	Augusta
Pleasant Point Road	Pleasant Point Association	Install 3 BMPs, crown and ditch road. Install buffer.	8/7/2007	YCC & CRLA 319	No No Board decision A unknown	China Lake	China
Merck Lane	Merck Shipping Corporation	Remove failing retaining wall and clean out stream		319/Art Grindle	Yes No A Art Grindle needs to approve	Webber Pond	Vassalboro
Rte 32 and Rte. 3	DOT	Clean out culverts and armor culverts. Seed and mulch banks		YCC	Yes No B Caretaker will complete all projects single-handedly	3 Mile Pond	China
Tarybelu Lane	Tarybelu Lane Road Association	Armor road banks around culverts near stream. Clean out ditch.		YCC & CRLA 319	Yes Yes A Project Completed	China Lake	China
Tony's Way/Tardif Lane		Place filter fabric. Crown road. Ditch sides. Replace, install and armor culverts as needed		319/Art Grindle	No No 319 cost-share pending	Webber Pond	Vassalboro

Milfoil Prevention

Our staff of veteran courtesy boat inspectors completed the fourth season of education and inspection endeavors in the China Lakes Watershed. The “Eleven Most Unwanted” aquatic plants are a threat to all bodies of water in our state. They clog up swimming and boating areas. They can, and do, kill our native plants and animals. This is the fourth consecutive year the CRLA has had in place an aquatic invasive species watch program, also known as our “Courtesy Boat Inspection Program.”

For six hour shifts, our staff works at the boat landings at Three Mile Pond and China Lake to help make the community more aware of the threat that invasives have to our lakes. These faithful few also manually check all watercraft for any sign of species on the watch list. Additionally, our staff actively removes debris and rubbish from the landings and surrounding area, and offers assistance to boaters with the loading and unloading of watercraft.

Our staff, volunteer and paid, are trained and certified by the people at the Volunteer Lake Monitoring Program (VLMP) to whom many thanks are due. This year, our program inspected over 1000 boats for milfoil and other invasives. Furthermore, after a vote by the Webber Pond Association, we have expanded our activities to include the Webber Pond boat landing. Anyone interested in doing work for the CRLA with boat inspections should contact lakesalliance@yahoo.com. The specifics of the year to date can be found in appendix number four at the back.

Thanks to all who participated in our program this year. Special thanks to Tom Whittaker, who designed and created our spectacular inspectors’ shirts. We look forward to working with all who enjoy our lakes. See you again this summer.

Respectfully,

Peter Wilkens
Director China Region Lakes Alliance
Conservation Corps
Courtesy Boat Inspections



Milfoil inspections - list of inspections during the 2007 field season

Date	Day	Head of Lake	Hours	3 Mile Pond	Hours	Vassalboro	Hours
26-May	Saturday	R. Collins=Paid Inspector L. Columbia=Volunteer	8:00-2:00 8:00-2:00	C. Wilkens= Paid Inspector B. Parquette=Volunteer	9:00-3:00 9:00-3:00	T. Doughty=Paid Inspector P. Wilkens=Volunteer	8:00-2:00 8:00-2:00
27-May	Sunday	P. Wilkens=Paid Inspector M. Emery=Volunteer	11:00-5:00 11:00-5:00	C. Wilkens=Paid Inspector B. Parquette=Volunteer	9:00-3:30 9:00-3:30	A. Fuller=Paid Inspector J. Lees=Paid Inspector H. Fish=Volunteer	8:00-2:00 8:00-2:00 8:00-2:00
5/28/2008	Monday	P. Wilkens=Paid Inspector T. Doughty=Paid Inspector	12:00-2:00 12:00-2:00	P. Wilkens=Paid Inspector C. Wilkens=Paid Inspector	9:00-12:00 9:00-12:00		
6/3/2007	Sunday			J. Lees=Paid Inspector H. Fish=Volunteer	9:00-3:00 9:00-3:00		
6/10/2007	Sunday	C. Wilkens=Paid Inspector B. Paquette=Volunteer	9:00-1:00 9:00-1:00	J. Lees=Paid Inspector H. Fish=Volunteer	10:00-4:00 10:00-4:00		
6/16/2007	Saturday			J. Lees=Paid Inspector H. Fish=Volunteer	8:30-2:30 8:30-2:30	L. Ferland=Paid Inspector C. Hussey=Volunteer	9:00-3:00 9:00-3:00
6/17/2007	Sunday	J. Lees=Paid Inspector H. Fish=Volunteer	8:00-2:00 8:00-2:00	C. Wilkens=Paid Inspector B. Paquette=Volunteer	9:00-3:00 9:00-3:00	P. Wilkens=Paid Inspector B. Foster=Volunteer C. Wilson=Volunteer	9:00-3:00 9:00-3:00 9:00-3:00
6/23/2007	Saturday	N. Brown=Paid Inspector T. Doughty=Paid Inspector	9:00-3:00 9:00-3:00	C. Wilkens=Paid Inspector S. Fletcher=Paid Inspector	8:30-3:30 8:30-3:30	J. Lees=Paid Inspector H. Fish=Volunteer	9:00-3:00 9:00-3:00
6/24/2007	Sunday	P. Wilkens=Paid Inspector	12:00-2:00	N. Brown=Paid Inspector T. Doughty=Paid Inspector	9:00-3:00 9:00-3:00		
6/30/2007	Saturday	C. Wilkens=Paid Inspector S. Wilkens=Volunteer	9:00-3:00 9:00-3:00	T. Doughty=Paid Inspector N. Brown=Paid Inspector	8:30-2:30 8:30-2:30		
7/1/2007	Sunday	N. Brown=Paid Inspector P. Wilkens=Paid Inspector	9:00-3:00 9:00-3:00	J. Lees=Paid Inspector H. Fish=Volunteer	9:00-3:00 9:00-3:00		
7/4/2007	Wednesday	N. Brown=Paid Inspector N. Deas=Volunteer	8:30-2:30 8:30-2:30	C. Wilkens=Paid Inspector S. Fletcher=Paid Inspector	8:15-2:15 8:15-2:15		

Milfoil inspections - list of inspections during the 2007 field season

Date	Day	Head of Lake	Hours	3 Mile Pond	Hours	Vassalboro	Hours
7/7/2007	Saturday	T. Doughty=Paid Inspector N. Doughty=Paid Inspector	8:30-2:30 8:30-2:30	C. Wilkens=Paid Inspector C. Hudson=Volunteer	8:00-2:00 8:00-2:00	J. Lees=Paid Volunteer H. Fish=Volunteer C. Wilson=Volunteer B. Foster=Volunteer Rain Date	9:00-3:00 9:00-3:00 9:00-3:00 9:00-3:00
7/8/2007	Sunday	Rain Date		Rain Date			
7/14/2007	Saturday			P. Wilkens=Paid Inspector E. Malley=Paid Inspector	9:00-3:00 9:00-3:00	L. Killian=Paid Inspector Z. Newman=Volunteer	8:00-2:00 8:00-2:00
7/15/2007	Sunday			P. Wilkens=Paid Inspector L. Killian=Paid Inspector	9:00-3:00 9:00-3:00	L. Ferland=Paid Inspector C. Hussey=Volunteer	9:00-3:00 9:00-3:00
7/21/2007	Saturday	P. Wilkens=Paid Volunteer	9:00-3:00	N. Brown=Paid Inspector T. Doughty=Paid Inspector	8:00-2:00 8:00-2:00	J. Lees=Paid Inspector A. Lees=Volunteer	9:00-3:00 9:00-3:00
7/22/2007	Sunday	J. Lees=Paid Inspector H. Fish=Volunteer B. Foster=Volunteer	9:15-3:15 9:15-3:15 9:15-3:15	N. Brown=Paid Inspector T. Doughty=Paid Inspector	9:00-3:00 9:00-3:00		
7/28/2007	Saturday			C. Wilkens=Paid Inspector	8:00-12:00	J. Lees=Paid Inspector R. Krummel=Paid Inspec- tor	8:00-2:00
7/29/2007	Sunday	P. Wilkens=Paid Inspector J. Hebert=Volunteer	12:00-2:00 12:00-2:00	E. Malley=Paid Inspector T. Doughty=Paid Inspector N. Brown=Paid Inspector	8:00-12:00 10:00-3:00 10:00-3:00	J. Lees=Paid Inspector C. Porter=Paid Inspector B. Foster=Volunteer C. Wilson=Volunteer J. Lees=Paid Inspector H. Fish=Volunteer J. Lees=Paid Inspector B. Foster=Volunteer	9:00-3:00 9:00-3:00 9:00-3:00 9:00-3:00 9:00-3:00 9:00-3:00 9:00-3:00
8/4/2007	Saturday						
8/5/2007	Sunday	T. Doughty=Paid Inspector N. Brown=Paid Inspector	9:00-3:00 9:00-3:00				
8/11/2007	Saturday	T. Doughty=Paid Inspector N. Brown=Paid Inspector	8:00-2:00 8:00-2:00			J. Lees=Paid Inspector C. Sylvain=Paid Inspector R. Krummel=Paid Inspec- tor	9:00-3:00 9:00-3:00 9:00-3:00
8/12/2007	Sunday	C. Wilkens=Paid Inspector B. Paquette=Paid Inspector	9:30-3:30 9:30-3:30	C. Porter=Paid Inspector N. Busmanis=Paid Inspec- tor	8:00-2:00 8:00-2:00	H. Fish=Volunteer	9:00-3:00 10:00- 1:00 10:00- 1:00
8/18/2007	Saturday					J. Lees=Paid Inspector A. Lees=Volunteer	

Milfoil inspections - list of inspections during the 2007 field season

Date	Day	Head of Lake	Hours	3 Mile Pond	Hours	Vassalboro	Hours
8/19/2007	Sunday					J. Lees=Paid Inspector A. Lees=Volunteer	9:00-1:00 9:00-1:00
8/25/2007	Saturday	T. Doughty=Paid Inspector N. Brown=Paid Inspector	9:00-1:00 8:00-12:00	C. Wilkens=Paid Inspector B. Paquette=Paid Inspector	8:00-2:00 8:00-2:00	J. Lees=Paid Inspector A. Lees=Volunteer H. Fish=Volunteer	9:00-3:00 9:00-3:00 9:00-3:00
8/26/2007	Sunday	N. Brown=Paid Inspector C. Wilkens=Paid Inspector	8:00-12:00 8:00-12:00			J. Lees=Paid Inspector A. Lees=Volunteer B. Foster=Volunteer H. Fish=Volunteer	9:00-3:00 9:00-3:00 9:00-3:00 9:00-3:00

2007 Boat Inspections			
Boat Landing Hours (Total)			
	Head of the Lake (China)	3-Mile Pond	Vassalboro (China) Total
Paid Hours	146	198	476
Volunteer Hours	53	48	251
Total Hours	199	246	727
Dollars Total Per Site (at 6.75 per hour)	985.5	1336.5	3213
Volunteer Hour Value (at 6.75 per hour)	357.75	324	1694
Coordinator Total Hours (at 10 per hour)	420 Dollars		
Boats Inspected by Lake	548 Boats China Lake	245 Boats 3-Mile	793 Boats

School on the Lake

One of the missions of the CRLA is to provide educational opportunities in our member towns. In 2007 the CRLA helped coordinate educational days for the entire 51 students in the China Middle School fifth grade and the eighth graders from Vassalboro. This annual event is jointly sponsored by the CRLA, CLA, Maine Lakes Conservancy Institute, Colby College, and the Maine Department as part of their commitment to lake education. China Lake Day's goal is provide young students a hands-on approach to learning about our lakes. During the on lake session the scientific equipment on the floating classroom from the MLCI enabled the students to measure water clarity, temperature, oxygen concentration and look at small lake invertebrates that are part of the lake food web. The on shore portion of the day consisted of a tour of the Kennebec Water District Filtration Plant and a session led by Peter Wilkens on invasive plants and animals. Peter pointed out that China Lake is already home to one unwelcome inhabitant, the Chinese Mystery Snail. This three inch large snail is not native to Maine lakes and may out-compete our smaller native snails. Education is an important part of the mission of the CRLA and for the past 15 years providing important lake based educational activities for China students has been a priority.



Rex Turner and friends “China Lake Day”



CRLA - working to protect and improve your watershed



This project was funded in part by a grant from the US Environmental Protection Agency, through Section 319 of the Clean Water Act, administered by the Maine Department of Environmental Protection; and also in part by the Towns of China, Vassalboro and Windsor, and the Kennebec Water District.