

Thompson Lake



Youth Conservation Corps Final Report 2011

Prepared by: Drew McLaren, Coordinator/Crew Chief

2011 Staff

Crew Members:

Justin St. John	Harrison
Tucker Johnson	Harrison
Megan McNelly	Oxford

Coordinator/ Crew Chief

Drew McLaren	Harrison
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2011 Staff Biographies

Coordinator/Crew Chief

Drew McLaren-

This is Drew's fifth and final year with the YCC, where he has served in all capacities of the program. In the fall he heads back to the University of Maine at Farmington to complete his B.A. in history.

Crew

Justin St. John-

Justin completed his first year at the University of Maine at Orono where he is studying accounting. Justin has been with the TLEA YCC for four years now and has been a great asset.

Tucker Johnson-

Tucker completed his second year on the crew. He spent last year gaining experience in the Mexican backcountry and earning a Wilderness EMT certificate. He will start his freshman year at Warren Wilson College in North Carolina this fall.

Megan McNelly-

Megan was the lone rookie on the crew. She is entering her senior year at Oxford Hills Comprehensive High School. Though she was new to the crew and missed the first week in order to attend Girls State at Husson College, she caught on quickly and rounded out the YCC's most successful crew in five years.

YCC Steering Committee:

Tom Ray
Tony Caggiano
Jean Hankins
Marcia Pottle
Dan Porter
Stan Tetenman

Consultant: Jeff Stern

Summer Synopsis:

The Youth Conservation Corps had a very successful season in 2011. They completed their most jobs since 2007. They also moved the largest total yards of material at 225.5 yards, including a total 151 yards of rip-rap. The crew put in a record-setting 121 plants. Though numbers can't create the whole picture of what the YCC does, it is helpful to consider them. The YCC worked closely again with Jeff Stern on the Otisfield 319 grant project, completing the remaining Residential Matching Grant projects as well as planting a buffer on Silvaqua's north beach. The work of the YCC contributed to the successful completion of the 319 grant. The assistance of Jeff Stern, coordinator of the 319 Project and YCC consultant, was invaluable in creating projects for the YCC.

Summary of Completed Jobs

Town	Number of Completed Jobs
Oxford	8
Otisfield	14
Poland	1
Casco	0

The Thompson Lake Environmental Association's Youth Conservation Corps (YCC) has just completed its tenth consecutive summer of providing solutions to soil erosion problems in the watershed of the lake. The YCC consists of a group of area high school and college students, led by an adult coordinator and crew chief. A TLEA steering committee provides overall direction. Funding for the YCC program comes from two lake towns, donations from individuals, grants from charitable foundations, and membership dues.

The main environmental problem facing Thompson Lake, and all other Maine lakes, is keeping it from receiving too much phosphorus, an essential plant nutrient. Excessive amounts of phosphorus lead to harmful algae blooms that can turn the lake green and can upset the lake's ecological balance, notably its fish habitat. Three factors contribute:

- Land development. As the area surrounding the lake is continuously built up, the water's quality is jeopardized. Deforestation, driveway construction, ditches, and excavated soil allow soil particles to be carried directly into the lake each time it rains. These soil particles fill in the lake and carry all sorts of compounds and chemicals, especially phosphorus, into the lake.
- Shoreline erosion caused by the action of waves and boat wake which also sweep soil and phosphorus into the lake.
- Thoughtless landscaping. Lawns extending to the lake often serve as conduits for lawn chemicals, phosphorus being the most prevalent.

TLEA, assisted by the Maine DEP, carried out intensive surveys of the entire Thompson Lake watershed in five towns during the springs of 2008, 2009, and 2010 to determine the nature and location of its erosion problems. In April 2008 volunteers surveyed most of the Otisfield part of the watershed; in 2009, Poland and Casco; and in 2010 the remainder of the watershed, including all of Oxford and also parts of Otisfield and Norway along the shores of Greeley Brook. Approximately 350 erosion sites were discovered: about 100 sites in each of the first two surveys, and 145 in the last.

The next step for TLEA was to find solutions to these specific problems. Most erosion sites were and are located on private residential properties. The property owners involved were notified and urged to contact the YCC for remedial work. The surveys also identified larger erosion problems on town and private roads, most of which are beyond the scope of the YCC's expertise and equipment capabilities.

Affected property owners typically agree to pay for materials needed to arrest or slow erosion while the YCC provides labor and expertise and obtains required permits. This year the crew installed riprap and erosion control mix; established new buffer plantings; built infiltration steps; constructed water bars and box culverts. The purpose of all these measures is to create a means of filtering phosphorus-laden run-off naturally before it enters the lake.

The following report, written by retiring YCC Coordinator a crew chief Drew McLaren, gives the details of the YCC's tenth year.

Robert Skalski
 404 Forrest Edwards Rd
 Otisfield

Project Dates: 6/20-6/21



Material	Units of measurement	Quantity	Cost per unit	Total cost
Rip-Rap	Cubic Yards	6	25.00	150.00
3/4" Stone	Cubic Yards	1.5	25.00	37.50
Delivery	N/A	2.5	40.00	100.00
Low Bush Blueberries	Plant	8	18.00	144.00
Pressure Treated Lumber	2x6-10	2	6.59	13.18
Pressure Treated Lumber	2x6-8	3	5.25	15.75
Pressure Treated Lumber	2x6-12	1	7.79	7.79
Pressure Treated Lumber	2x8-10	1	8.69	8.69
Pressure Treated Lumber	2x8-8	1	7.29	7.29
Nails	N/A	1	1.00	1.00
Fabric	Linear Feet	20	1.00	20.00
Maine sales tax	5%	—	—	11.09
Total:				516.29

Problem: Mr. Skalski’s shoreline was eroding due to ice and wake erosion as well as roof run-off.

Solution: The YCC installed a drip line trench along the roof-line and a box culvert to divert driveway runoff. They rip-rapped and added plants to make the shoreline more stable.

Craig and Andrea Benson
 456 Pleasant St.
 Oxford

Project Dates: 6/22-6/23



Material	Units of measurement	Quantity	Cost per unit	Total cost
Rip-Rap	Cubic Yards	28	23.30	652.40
Low Bush Blueberries	Plant	7	18.00	126.00
Maine sales tax	5%	—	—	39.23
Total:				817.63

Problem: The Bensons' shoreline was sloughing and undercut in spots.

Solution: The YCC rip-rapped the shoreline and planted a buffer above the shoreline to protect it from run-off and erosion caused by ice and wake.

Elizabeth Sutton
 Cobb Hill Rd.
 Otisfield

Project Dates: 6/27



Material	Units of measurement	Quantity	Cost per unit	Total cost
Pressure Treated Lumber	2x6-16	6	11.49	68.94
Pressure Treated Lumber	2x8-16	3	14.59	43.77
Pressure Treated Lumber	2x4-8	1	4.69	4.69
Nails	N/A	3	1.00	3.00
Maine sales tax	5%	—	—	5.87
Total:				126.27

Problem: Ms. Sutton’s driveway was scouring.

Solution: The YCC installed three box culverts to divert run-off.

Hal Ferguson
 213 Shore Rd.
 Otisfield

Project Dates: 6/28



Material	Units of measurement	Quantity	Cost per unit	Total cost
3/4 inch Stone	Cubic Yards	3	25.00	75.00
Delivery	N/A	1	40.00	40.00
Fabric	Linear Feet	30	1.00	30.00
Fabric Staples	Staple	29	0.10	2.90
Maine sales tax	5%	—	—	
Total:				147.90

Problem: Mr. Ferguson had severe roof run-off.

Solution: The YCC installed a drip-line trench to reduce the erosive impact of the run-off.

Joe and Janet Idzal
 29 Shore Rd.
 Otisfield

Project Dates: 6/29-7/7



Material	Units of measurement	Quantity	Cost per unit	Total cost
Erosion Control Mix	Cubic Yards	8	19.50	156.00
Brown Mulch	Cubic Yards	21	35.00	735.00
Delivery	N/A	4	45.00	180.00
Bearberry	Plant	6	17.10	102.60
Rose	Plant	2	21.59	43.18
Crimson Pygmy	Plant	1	27.89	27.89
Barberry	Plant	1	23.39	23.39
Black Eyed Susan	Plant	1	13.50	13.50
Little Suzy	Plant	1	9.89	9.89
Duke	Plant	1	31.49	31.49
Goldstrum	Plant	1	14.39	14.39
Hosta	Plant	1	18.89	18.89
Blueberry	Plant	1	25.19	25.19
Plant Mix	Plant	16	1.00	16.00
Fabric	Linear Feet	15	1.00	15.00
Maine sales tax	5%	—	—	69.07
Total:				1481.48

Problem: The Idzals had a large bare area at the end of a steep driveway.

Solution: The YCC spread erosion control mulch and bark mulch, as well as planting the whole area to stabilize the soil and divert run-off.

Andre and Kandy Simon
 44 Canada Hill Shores
 Otisfield

Project Dates: 7/6-7/7



Material	Units of measurement	Quantity	Cost per unit	Total cost
Rip-Rap	Cubic Yards	28	23.30	652.40
Maine sales tax	5%	—	—	32.62
Total:				685.02

Problem: The Simons had a crumbling stone retention wall. The soil behind it was washing into the lake.

Solution: The YCC rip-rapped the shoreline to re-stabilize it and prevent further erosion.

Chuck and Diane Morris
 47 Briggs Island
 Oxford

Project Dates:7/11-7/13



Material	Units of measurement	Quantity	Cost per unit	Total cost
Rip-Rap	Cubic Yards	36	26.00	936.00
Delivery	N/A	12	40.00	480.00
Maine sales tax	5%	—	—	
Total:				1416.00

Problem: The Morris' shoreline was undercutting.

Solution: The YCC rip-rapped the shoreline to protect and stabilize it.

Jack Fein
 47 Wacipi Pines Rd
 Otisfield

Project Dates: 7/14



Material	Units of measurement	Quantity	Cost per unit	Total cost
Rip-Rap	Cubic Yards	One Half	25.00	12.50
Delivery	N/A		10.00	10.00
Maine sales tax	5%	—	—	
Total:				22.50

Problem: Mr. Fein had an old wooden step into the water that was rotting, and the shoreline behind it was eroding.

Solution: The YCC removed the step and extended the rip-rap behind the step.

Silvaqua Owners Association
North Beach
Otisfield

Project Dates: 7/13



Problem: There was an inadequate buffer at the Silvaqua North Beach.

Solution: The YCC planted 55 blueberry plants along 135 feet of shoreline to improve soil stability and to create a buffer.

The Silvaqua Owners Association paid \$500 of the total cost.

Kim Talmor
 5 Franks Ln.
 Otisfield

Project Dates: 7/18



Material	Units of measurement	Quantity	Cost per unit	Total cost
Pressure Treated Lumber	2x6x12	2	7.79	15.58
Dark Mulch	2 Cubic Foot Bag	6	5.00	30.00
Compost	40lb Bag	4	4.00	16.00
Hosta Plant		2	16.99	33.98
Blueberry Plant		5	20.99	104.95
Day Lily Plant		7	10.99	76.93
Razor Bar Rubber	12ft	1	5.00	60.00
Maine sales tax	5%	—	—	13.97
				351.31

Problem: Ms. Talmor had run-off from her road into a bare lawn, and a thin buffer on her shoreline.

Solution: The YCC installed a razor bar to divert the run-off into a rain garden they installed. The crew also planted blueberries on the shoreline to thicken the buffer.

Larry Goldsmith
 111 Beechwoods Rd.
 Oxford

Project Dates:7/19



Material	Units of measurement	Quantity	Cost per unit	Total cost
Pressure Treated Lumber	2x8x12	1	10.39	10.39
Pressure Treated Lumber	2x8x8	2	7.09	14.18
Pressure Treated Lumber	2x8x10	1	8.89	8.89
Pressure Treated Lumber	2x6x10	2	6.59	13.18
Pressure Treated Lumber	2x6x8	4	5.39	21.56
Pressure Treated Lumber	2x6x12	2	7.79	15.58
Nails			2.00	2.00
Maine sales tax	5%	—	—	4.19
Total:				89.97

Problem: Mr. Goldsmith had a lot of run-off down his driveway.

Solution: The YCC installed two box-culverts to divert the water off the driveway into a duff layer.

Bob Cotton
 50 Cotton Lane
 Oxford

Project Dates: 7/19



Material	Units of measurement	Quantity	Cost per unit	Total cost
Pressure Treated Lumber	2x6x10	4	6.89	27.56
Pressure Treated Lumber	2x6x12	2	7.79	15.58
Pressure Treated Lumber	2x8x10	2	8.89	17.78
Pressure Treated Lumber	2x8x12	1	10.39	10.39
Pressure Treated Lumber	2x4x8	1	4.79	4.79
Nails			2.00	2.00
Maine sales tax	5%	—	—	3.81
Total:				81.91

Problem: Mr. Cotton had a rotted out box-culvert.

Solution: The YCC removed the old box culvert and replaced it with a new one.

Robert Griffin
 76 Pine Point Rd
 Oxford

Project Dates: 7/21-7/25



Material	Units of measurement	Quantity	Cost per unit	Total cost
	Cubic Yards	28	24.30	680.40
Maine sales tax	5%	—	—	34.02
Total:				714.42

Problem: Mr. Griffin had an old retaining wall that had fallen apart.

Solution: The YCC rip-rapped the shoreline over the old retaining wall to re-stabilize the shoreline.

Tim Wisecarver
 88 Ohuivo Camp Rd
 Otisfield

Project Dates: 7/26-7/27



Material	Units of measurement	Quantity	Cost per unit	Total cost
3/4" Crushed Gravel	Cubic Yards	36	19.00	684.00
Pressure Treated Lumber	2x6x12	6	7.79	46.74
Pressure Treated Lumber	2x6x10	2	6.89	13.78
Nails		3	1.00	3.00
Razor Rubber	Ft	46	5.00	230.00
Maine sales tax	5%	—	—	48.88
Total:				1026.40

Problem: Mr. Wisecarver had severe run-off down his driveway.

Solution: The YCC resurfaced the driveway with 3/4-inch crushed gravel and replaced three razor bars.

Ian Johnson
 40 Canada Hill Shores
 Otisfield

Project Dates: 7/28



Material	Units of measurement	Quantity	Cost per unit	Total cost
Rip-Rap	Cubic Yards	14	24.30	340.20
Maine sales tax	5%	—	—	17.01
Total:				357.21

Problem: The Johnsons' retaining wall was crumbling.

Solution: The YCC rip-rapped over the old retaining wall to re-stabilize the shoreline.

Kevin Giebel
 123 Beechwoods Rd.
 Oxford

Project Dates: 7/28



Material	Units of measurement	Quantity	Cost per unit	Total cost
Rip-Rap	Cubic Yards	1.5	35.00	52.50
Maine sales tax	5%	—	—	
Total:				52.50

Problem: Mr. Giebel’s retaining walls had sections that were falling out and eroding.

Solution: The YCC placed rip-rap on the exposed soil to re-stabilize the soil.

Thomas Downes
 11 Howlin' Wolf Lane
 Oxford

Project Dates: 8/2



Material	Units of measurement	Quantity	Cost per unit	Total cost
Low Bush Blueberry		4	20.99	83.96
Juniper		2	24.99	49.98
Plant Mix		6	1.00	6.00
Maine sales tax	5%	—	—	7.00
Total:				146.94

Problem: Mr. Downes had a steep shoreline that was eroding.

Solution: The YCC planted some juniper plants and blueberries to help stabilize the soil.

Dolores Whittum
 23 Whittum Lane
 Otisfield

Project Dates: 7/1



Material	Units of measurement	Quantity	Cost per unit	Total cost
Pressure Treated Lumber	2x6x16	2	11.19	22.38
Razor Rubber	Ft	16	80.00	80.00
Nails			1.00	1.00
Maine sales tax	5%	—	—	1.12
Total:				104.50

Problem: Mrs. Whittum had box culverts that were rotting out.

Solution: The YCC replaced one box culvert with another box culvert and replaced another one with a new razor bar.

Sharon Rice
 23 Bass Cove Lane
 Poland

Project Dates: 8/3-8/9



Material	Units of measurement	Quantity	Cost per unit	Total cost
Mineral Based Mulch	Cubic Yards	1	35.00	35.00
Rip-Rap	Cubic Yards	3		115.00
3/4" Stone	Cubic Yards	3		115.00
Chicken Wire	Square Feet	5	1.00	5.00
Pressure Treated Lumber	2x6x16	4	11.19	44.76
Nails		2	1.00	2.00
Razor Rubber	Linear Feet	32	5.00	160.00
Filter Fabric	4'x100'	1	42.89	42.89
Fabric Staples		50	0.10	5.00
Flex Drain Pipe	4"x100'	1	71.96	71.96
Sweet Hosta		2	21.99	43.98
Hosta		2	20.99	41.98
Plant Mix		4	1.00	4.00
Maine sales tax	5%	—	—	34.33
Total:				720.90

Problem: The Rices had severe run-off from a hill behind their house.

Solution: The YCC installed a curtain drain to divert the run-off around the house.

Bill Troy
70 Jillson Camp Rd.
Otisfield

Project Dates: 8/8



Mr. Troy supplied all the rip-rap used on this project.

Problem: Mr. Troy's shoreline was eroding.

Solution: The YCC rip-rapped the shoreline.

Ellen Bishop
 69 Sand Island Lane
 Otisfield

Project Dates: 8/9



Material	Units of measurement	Quantity	Cost per unit	Total cost
Pressure Treated Lumber	2x6x16	2	11.19	22.38
Pressure Treated Lumber	2x8x16	1	13.89	13.89
Nails			1.00	1.00
Maine sales tax	5%	—	—	1.81
Total:				39.08

Problem: A lower box-culvert on Mrs. Bishop’s driveway was filling up with sand very quickly.

Solution: The YCC installed a second box culvert at the top of the driveway.

Robert Bettencourt
 111 Hayes Cove Lane
 Oxford

Project Dates: 8/10



Material	Units of measurement	Quantity	Cost per unit	Total cost
Pressure Treated Lumber	2x6x16		11.19	22.38
Pressure Treated Lumber	2x8x16		13.89	13.89
Nails			1.00	1.00
Maine sales tax	5%	—	—	1.81
Total:				39.08

Problem: Mr. Bettencourt needed run-off diverted from his driveway.

Solution: The YCC installed a box-culvert to divert the run-off.

Cathy Sahrbeck
 200 Ohiuvo Camp Rd.
 Otisfield

Project Dates: 8/4 & 8/10



Material	Units of measurement	Quantity	Cost per unit	Total cost
Rip-Rap	Cubic Yards	6		230.00
Plant Mix		11	1.00	11.00
Low Bush Blueberry		11	20.99	230.89
Maine sales tax	5%	—	—	23.59
Total:				495.48

Problem: Mrs. Sahrbeck’s shoreline was eroding and had a narrow buffer.

Solution: The YCC installed more rip-rap on her shore and planted blueberries as a buffer along her shoreline.