

## CAMPERS WORK TO PROTECT OSSIPEE LAKE AT CAMP ROBIN HOOD, FREEDOM, NH

### BACKGROUND

Camp Robin Hood is an overnight camp for school-age children in Freedom, New Hampshire. Small cabins and larger common buildings dot the otherwise wooded 180 acres that slope down to the shore of Ossipee Lake's Broad Bay. Campers have many opportunities to enjoy a variety of activities throughout the summer. This year they had, and took full advantage of, an opportunity to give back to the camp that provides them with a summer full of fun and memories. Several groups of older campers set aside sports and waterfront activities and picked up shovels and sledge hammers in order to help reduce erosion of a well-used path that was washing sediment and other stormwater pollutants into the lake.



Campers and the Soak Up the Rain team celebrate the completion of the first SOAK project at Camp Robin Hood.

Corey Lane of the Green Mountain Conservation Group, located in Effingham, reached out to the DES Soak Up the Rain (SOAK) Team and to the Camp Robin Hood Director, Richard Woodstein, to start a SOAK project at the camp. Mr. Woodstein loved the idea of involving the campers in a project that would benefit the lake. Corey and the SOAK team visited the camp in July and found a walking path where a large amount of runoff was creating deep gullies and washing sand and sediment into the lake at the camp beach. The erosion it caused along the way was extensive enough to trip a distracted passerby and was even visible by satellite imagery.

### CAMPERS INSTALL STORMWATER TREATMENT PRACTICES

To stabilize the gully and prevent further erosion, the DES SOAK team designed a series of water bars along the upper portion of the path and a set of infiltration steps along a sleeping cabin closer to the beach. With a little background on how the project would benefit the lake and a few instructions, the campers went to work digging trenches, setting timbers, and shoveling drainage stone. Now, as runoff makes it way down the path, the water bars trap the runoff. Water soaks into the drainage stone and is directed to a wooded area next to the path, where it is soaked up by soil and plants.



Many hands make light work to install the timbers for the water bars.





The photo on the left shows the walking path with a large eroded gully caused by stormwater runoff during heavy rain storms. The photo on the right shows the same path with the water bars installed and the gully repaired.

Further on down the hill and adjacent to a sleeping cabin, an existing set of steps were retrofitted with infiltration steps. Campers removed compacted soil and hard pack from the existing steps and replaced it with drainage stone. The hard pack material was used to fill in and repair the gullies that had formed. Below the new infiltration steps, several hard working campers worked tirelessly to build two new steps. These too were filled in with drainage stone. Now, as the stormwater runoff makes its way to the steps, it gets traps in the drainage stone and soaks into the ground. As each step receives more water than it can drain, the water spills over to the next step and so on.



The photo on the left shows erosion from the steps before replacing them with infiltration steps. You can see that the erosion makes its way to the lake in the distance. The photo on the right shows the finished infiltration steps and repaired gully.

## PROJECT COMPLETED

The SOAK team, GMCG, and Camp Robin Hood staff were very impressed with the campers' attitudes and willingness to work. They dug, shoveled stone, pushed wheelbarrows full of material up and down the hill, and drove rebar through timbers all day and not a complaint was heard. In fact, they were quite invested in the project. Several campers were overheard explaining to their peers how the old, eroding path was carrying pollution to lake and how installing the water bars and infiltration steps would reduce the stormwater runoff and help protect water quality. The water bars and infiltration steps installed are estimated to prevent 4,488 cubic feet of runoff, 11,600 pounds of sediment, 3.1 pounds of phosphorus, and 5.4 pounds of nitrogen from entering Broad Bay each year.

It was a very successful day for Camp Robin Hood, Ossipee Lake, and Soak Up the Rain NH!

## FOR MORE INFORMATION

To learn how to build your own water bars, infiltration steps, or to find out about other ways to manage stormwater on your property, explore the Soak Up the Rain NH website at [www.soaknh.org](http://www.soaknh.org).