



## CEI NEWS

# Watershed Management

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### CEI Speaks at Designing for Success

On April 25 and 26<sup>th</sup> the Society for Ecological Restoration- New England Chapter and the Conway School-Master of Science in Ecological Design Program teamed to produce *Designing for Success – Ecological Restoration in Times of Change* Conference. Held at Hampshire College in Amherst, MA, CEI staff and Dr. Catherine Owen Koning from Franklin Pierce University co-presented 'Watershed Management and Modeling as Tools in the Restoration of Pearly Pond, Rindge NH.'



A coalition of partners, including CEI, is developing a watershed management plan to restore the lake water quality to levels that will eliminate harmful algae blooms. The basis of the plan is a computer model that simulates water and nutrient loads entering the pond from the watershed and predicts an in-pond phosphorus concentration. The model is then used to determine the nutrient load reductions needed to achieve specific water quality goals and how changes in the watershed (e.g., nutrient controls, build-out scenarios) will impact the pond's water quality. This information is used to develop a long-term restoration plan intended to improve overall water quality in Pearly Pond.

Preliminary investigations and model runs show the major sources of phosphorus in the Pearly Pond watershed are stormwater runoff from roadways and developed areas, water fowl, lawn maintenance, erosion from steep slopes and gravel roads, wastewater from septic systems and a historic wastewater treatment plant discharge. The restoration plan outlines a 10-year program to reduce phosphorus loads from the watershed and improve water quality, including the installation of stormwater best management practices (BMPs) and educating watershed residents. A long-term monitoring / modeling program is also proposed to refine phosphorus sources, including potential background contributions from groundwater.

For more information on this project or CEI's services please contact Ben Lundsted at 603.424.8444 or [blundsted@ceiengineers.com](mailto:blundsted@ceiengineers.com) or <http://www.franklin Pierce.edu/about/pearlypond/index.htm>.

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