

## ERIE Program develops stream restoration research collaboration with LaFarge North America and NY DEC



### **Ecosystem Restoration**

A broad range of activities to assist the recovery of aquatic and terrestrial ecosystems that have been impaired, damaged or destroyed.

### **The ERIE Program:**

An interdisciplinary doctoral program at UB that advances ecosystem restoration science and engineering. ERIE addresses critical knowledge gaps by training researchers in ecological restoration science, engineering, policy, ethics, and cultural considerations, through focus on issues facing the Great Lakes and western New York.

*The ERIE collaborative partnership spans eight graduate programs at UB:*

- American Studies
- Biology
- Chemistry
- Environmental Engineering
- Evolution, Ecology and Behavior
- Geography
- Geology
- Philosophy

**(January 2010)** Continuing with its goal to help the ecological recovery of Great Lakes watersheds in western New York, the *Ecosystem Restoration through Interdisciplinary Exchange* (ERIE) Program at UB is collaborating with mining conglomerate LaFarge North America (LNA) and the New York State Department of Environmental Conservation (DEC) to investigate restoration alternatives for a segment of Elton Creek on LNA's mining site in Freedom, NY (Cattaraugus County). The continued development of this relationship at the proposed research site provides a unique opportunity for a long-term (five to ten year) platform for restoration research opportunities in a mining-disturbed watershed, potentially targeting critical needs in ecological restoration science and engineering. LNA's enthusiastic collaboration with ERIE affords researchers a location to ask and answer questions about the response of aquatic benthic and fish communities to engineered structural changes typically employed in stream restoration. A preliminary study conducted in Spring and Summer of 2009 by ERIE trainees compared common rapid assessment techniques that quantify the dynamic nature of stream structure and ecological integrity, providing a basis for future assessments following restoration. ERIE



researchers have proposed field experiments to quantify stream ecosystem structure and function within the Elton Creek watershed, and considerations are under way for design of experimental in-stream redirective structures using waste material from the LNA mining site, potentially closing a resource loop in the process of restoring the ecological health of an important western New York waterway.