



USDA-CSREES 2006 National Water Quality Conference

[Stream Side Science: Creating educational tools that meet the needs of teachers](#)

USU Water Quality Extension reaches over 5,000 youth each year in hands-on activities that utilize stream monitoring techniques. In an effort to expand our reach, we have adopted a “train the trainer” model, teaching classroom and informal educators on how to use our different activities. Widespread use of these activities by classroom teachers, however, has remained limited to those with a special interest in water and outdoor education.

We conducted a formal evaluation of barriers to teacher adoption of hands-on stream based activities. These barriers include a limited understanding of water quality and watershed science by most teachers, a desire for detailed yet relatively simple lesson plans, uncertainty about working outdoors with students, financial constraints, and the increasing need to focus on core curriculum standards with end of year testing in mind.

We have developed a monitoring-based curriculum (Stream Side Science) that specifically addresses all of the barriers we identified. This curriculum has now been distributed by the Utah State Office of Education to all Earth Systems Science teachers in the state, and we have conducted training for over 200 teachers on watershed and water quality science and the use of our lesson plans to teach these concepts.

This talk will focus on how we tailored this curriculum around the identified needs of teachers, our findings on the effectiveness of the curriculum at improving watershed and water quality knowledge, and how we are working with new partners to expand the reach of this curriculum beyond its original targeted audience.

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