



**Title:** Training Environmental Stewards: Integrating Water Quality & Quantity Education from Mountain to Ocean

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**Theme:** Watershed Management

**Situation:** It is necessary for citizens to understand how land use impacts water resources and what steps they can take to reduce that impact. Volunteers trained by Washington State University Cooperative Extension (WSU CE) can help in this regard. The volunteer work force will be trained in 1) how specific land-use practices impact water quantity and quality, and 2) techniques that landowners can use to reduce this impact. These techniques will be tailored to narrowly defined land-uses (e.g. rural landowner, livestock owner, urban homeowner, or forestry landowner) based on the missions of the specific volunteer program. In exchange for training, volunteers will provide an equivalent amount of volunteer service back in their local communities. WSU CE-King County has replicated this model in several subjects, including Forest Advisors, Livestock Advisors, Master Recycler-Composters, and Land/Water Stewards. A new educational program (Living on the Land) focuses on "lifestyler" landowners, who are people that have recently purchased >5 acres in rural areas. They usually have no background in land management and often resort to large chemical use. They tend to purchase livestock to complete their rural lifestyle, again having little or no background or education in how to raise the animals, care for the land, and protect water quality. Each of these programs concentrates on proper resource stewardship for their intended audience, including water quality issues. However, we are not aware of a single set of curriculum that addresses these diverse land-use issues in a concise and integrated way.

**Objectives:** To foster this integrated training, the objective of this three-year project is to develop a single set of curriculum that has 1) a core water quality and quantity component and 2) additional specialized modules to use in training volunteers to deliver water quality programming relevant across a wide variety of land-uses. Specific objectives are 1) Develop a core water quality and quantity curriculum and associated modules that relate to specific land-use concerns; 2) Implement and evaluate this curriculum into volunteer training classes; 3) Expand support for developing and delivering outreach activities by trained volunteers; 4) Provide an opportunity for youth to get hands-on exposure to water quality issues; 5) Disseminate training curriculum to other agencies; and 6) Pilot an education event showcasing to the general public the water quality and quantity protection methods employed by agricultural producers.

**Methods:** Program objectives will be accomplished through curriculum development, volunteer training, and public education. The curriculum will be modular based with recommendations for required, or core, components and lessons along with optional lessons and more in-depth material. The curriculum will look at water quality & quantity management across types land use, from mountains to the ocean. Once volunteers are trained, support and opportunities to disseminate their information and reach more people will be accomplished by direct one-on-one contacts, organizing and conducting community building projects, providing a drop in question & answer clinic, large scale public education, and education to natural resource producers (horticulture, livestock, forestry).

**Partnerships:** Volunteer trainings utilize instructors from King Conservation District, Cooperative Extension Faculty, private citizens, private organizations, King County Dept. of Natural Resources and Parks, Univ. of Washington faculty, veterinarians, and many more. Educational programs have developed partnerships with From the Heart of Washington marketing campaign, Farm Bureau, and local businesses.

**Research:** This project uses research-based information to develop curriculum used to train environmental stewards, who then provide outreach on ways to reduce individual impacts to water quality and foster an overall environmental stewardship in the public they reach.

**Resources:** This project expands the reach of several programs currently funded through the local extension office. In addition, through developing community partnerships to deliver educational programs we have leveraged an additional \$30,000 in cash and in-kind donations. This is in addition to all the teaching local professionals provide during over 250 hours of volunteer and public education and the hours of service provided by the volunteers themselves.

**Results:** Volunteer Training and Outreach - 20 Extension Livestock Advisors trained. 160 volunteer hours and 502 public contacts. 80 Master Gardeners trained. 20 Land/Water Stewards trained. 734 volunteer hours and 3,076 public contacts, including providing additional one-on-one assistance to Living on the Land participants. Cooperative Extension programs in Arizona and Virginia have contacted us with interest in the program and curriculum. 17 participants in a Salmon Short Course consisting of 14 hours of training. 46 volunteer hours and 135 public contacts. Conservation Tools - 12 Land/Water Stewards participated in an advanced training on conservation tools for landowners; consisting of a classroom overview of topics and two hands-on field trips. 143 hours of additional volunteer time for organizing landowner workshops and conduct site visits. 106 landowners participating in workshops of which 9 enrolled a total of 69 acres in current use taxation conservation programs and other conservation measures. Success of program resulted in Washington Dept. of Ecology funding a grant proposal to extend this program to other counties. Outline of new curriculum is completed, expected having first draft of most modules completed by Jan 2004. Public Education - 2002 Harvest Celebration Farm Tour: Single day event where local farms are open to the public to tour and learn about local food production and environmental stewardship. In 2002: two farms highlighted manure management strategies livestock owners use to reduce water pollution; over 2000 predominately urban residents visited the 17 farms. Living on the Land: a 10-week, 25-hour series focusing on land & water stewardship for small acreage owners. 17 individuals completed the course with several attendees indicated desire for more detailed, in-depth information and a willingness to "trade" this information by volunteering as a local resource for other neighbors who need some help. Small Farm Expo: 1-day event bringing education and technical resources to small acreage owners and producers. Attended by 1000 members of public with nearly 200 attending educational talks related to water quality issues.



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