

Introduction and Overview

Why Watersheds and Why Local Protection

Despite huge improvements and widespread education programs, drinking water and surface water quality are still at risk. Many communities are unable to provide or protect high quality drinking water and/or citizens are unaware of how to ensure that their drinking water supplies are safe. According to the US Clean Water Action Plan, about half of the waters assessed by states are still unsafe for swimming and fishing. Continuing problems include fish advisories arising from toxic contaminants, costs of dredging sediments to maintain navigation, and biological contaminants. US EPA's Safe Drinking Water Act targets source water protection. The Clean Water Action Plan targets a watershed approach. Both new water initiatives support community-based programs that strengthen community health, natural resources stewardship, polluted runoff standards and controls, and involvement of citizens.

The Agua Pura Leadership Institute

Citizens have a variety of backgrounds, experiences and education. To involve citizens, local efforts must match citizen needs and interests. The Agua Pura Leadership Institute is focused on improving understanding of public education and involvement for citizens with a Latino background. Recognizing that youth are important partners in protecting local water quality, the Leadership Institute focuses on providing support and resources for youth watershed education.

Santa Barbara County, California, was chosen as the project site for developing a model for involving Latino youth in watershed protection. Reasons included high local interest, a large Latino population, and severe water quality problems that could be improved through a public education and action program. Watersheds in the Southern Coastal region of California surround streams that drain directly to the ocean. Local water problems include beach closings due to bacteria contamination and poor quality as a result of drought. Problems are thought to be caused by a combination of factors including broken sewer lines, runoff from horse farms, pet waste runoff, poor septic field maintenance, and inappropriate use of restricted water resources.

Agua Pura was born at a 1998 watershed action workshop for teachers and agency representatives, sponsored by the University of California - Santa Barbara County Extension. Participants unanimously supported creation of a Leadership Institute that would encourage and support expanded capacity among County educators and natural resource professionals to involve youth in watershed protection. Workshop participants included teachers, volunteer youth leaders, representatives of City and County water agencies, the Community Environmental Council which acts as a clearinghouse for all

County watershed activities and supports a citizen monitoring program, and a marine biology professor from Santa Barbara City College.

Agua Pura is a partnership of Cooperative Extension's Give Water A Hand, Santa Barbara County Cooperative Extension's 4-H Youth Development Program, and Santa Barbara City College and is a partner in Santa Barbara County's Project Clean Water Initiative.

Model Approaches to Watershed Education

While some members of our communities may be more affected than others by water-related health risks and quality of life issues, personal or community barriers may limit their involvement in local water quality protection activities. Watershed agencies and organizations, and water educators are in the same communities, but in many cases have not found ways to link their goals and skills.

The connection between community water problems and the formal school community needs to be strengthened.

Goals for Improving Youth Education for Sustainable Community Water Resources

- Share expertise among all the people involved
- Enhance capacity of the infrastructure
- Identify and promote keys to success

Unique national youth watershed education resources were selected as a foundation for the Leadership Institute. *Give Water A Hand* is a youth action campaign developed in partnership with several federal agencies and non-profit organizations and has Cooperative Extension contacts in over 40 states. The Global Rivers Environmental Education Network (GREEN) supports school-based watershed studies and community action. Adopt-A-Watershed is a national school-based watershed studies program that provides a K-12 sequence of science concepts linked to a community action component. The California Aquatic Science Education Consortium (CASEC) programs, materials, and educators provide model education resources.

Since 1997 GREEN and USDA Cooperative Extension have worked to combine their strengths to better support youth environmental stewardship. Both programs emphasize education reform goals: community action as a foundation for development of citizenship skills; an opportunity to learn-how-to-learn by practicing skills needed to apply knowledge in real situations; and a first-hand look at career interests by working closely with local professionals.

Strengthening the Connection Between Schools and the Community

There are three national programs that offer a step-by-step approach to building connections between schools and the community in environmental education stewardship programs. GREEN'S program, described in the *Sourcebook for Watershed Education*, was designed to support school education committees. Extension's *Educating Young People About Water* series and *Give Water A Hand – Youth Action Guide* start with the community and supply specific resources, guidance, and youth activities that support each step. Their recommendations for ways to strengthen the connections between schools and communities are listed in Appendix A. Information about how to obtain these guides is provided in Appendix D.

Pilot Study Description

The Leadership Institute in Santa Barbara County was designed by UC Cooperative Extension—Santa Barbara County, Santa Barbara City College, County public health and water agencies and local Latino and environmental groups. The Institute was developed to provide support for youth leaders who can involve Latino youth in understanding local water quality issues and local water protection. The focus of the Institute was on local watershed issues, strategies to involve the Latino community and how resources should be adapted to local needs and interests. The Leadership Institute relied on local expertise to address environmental science, the arts, computer resources, youth qualities, and education processes. Education resources from Give Water A Hand, Global Rivers Environmental Education Network (GREEN), Adopt-A-Watershed, and California Aquatic Science Education Consortium (CASEC) served as the foundation for improving understanding of how to involve local youth in watershed protection. Latino community leaders and other community members were involved in learning to use these materials and then analyzed how the materials could be adapted for local use.



Pilot Study Findings

What we have learned about the City of Santa Barbara:

- Latino neighborhoods are located where creeks are dirtiest from upstream.
- Kids play in creeks, families use beaches, youth are exposed to or participate in water sports.
- People are interested in the problem; they learn about water issues from TV, especially due to public information about the drought.
- In some communities, health issues are of primary concern; chemical pollutants are present in drinking water; families like to fish and eat the fish they catch—they often fish in or near the harbor where pollutants are likely to accumulate.
- Latino community members are not generally involved in water protection issues—due mainly to language and cultural barriers.
- Generally, outreach workers don't speak Spanish and are not familiar with the Latino community.

Agua Pura Continues

Relying on a small army of local college students led by one of the participants in the pilot Leadership Institute, Agua Pura continues to involve Latino youth and youth leaders throughout Santa Barbara County in workshops, camp programs, and after-school activities.

Reaching the community:

Education programs should:

- Engage bilingual and bicultural staff.
- Provide family-oriented activities.
- Involve community in program development and planning.
- Rely on person-to-person outreach.

Education topics should:

- Stress health related issues.
- Link to fishing and recreation activities.

Education materials should:

- Be adapted and translated well into Spanish – check that they are understood by participants.
- Use familiar images and icons.
- Integrate cultural activities, including arts, poetry.

Other education programs can increase attention to water:

- Math and science summer programs can integrate watershed education concepts.
- People in education settings need opportunities to learn about the importance of water.