Instructional approach: Our water science education program teaches watershed residents about the interrelationship between human activity on land and water quality in reservoirs and aquifers. We emphasize clear examples showing how participants can help protect water quality by protecting the environment. Within our region, we seek to serve some 162 elementary and middle schools in 16 municipalities. Combined, these schools hold between 40,000 and 45,000 students. At the Whitney Water Center, we have served a minimum of 5,000 students annually during class visits. We offer 19 different programs, designed to provide on-site experiences to both teachers and students. These cover the study of ecology, environmental science and water resources utilizing lake, stream, wetland and forest ecosystems. Students can also study environmental science using our *Exploring the Water World* workbook in the classroom, experience ecology firsthand during nature walks on our interpretive nature trails, or learn what it takes to get water to the faucet by touring one of our treatment plants.

Educational content: Educational programs at the Authority focus on water resources, while providing experiences in ecology, biology, chemistry and earth science. At the Center, students work with state-of-the-art laboratory equipment—water quality test kits, microscopes, interactive sand tank groundwater models and a video-microscopy system in hour-long activity-oriented programs. A "Pre-Visit Packet" is sent to teachers prior to their visit so that they may prepare students for the program and reinforce concepts back in the classroom.

Community needs met: Based on an Education Development Study in 1986, area school systems supported the idea of an environmental education center. The Regional Water Authority land and facilities were seen as valuable new resources for area science programs at all grade levels and could be used to strengthen existing science curricula. The study found "wide support for the development of water-related studies and for teacher training in the immediate New Haven area. Area educators believe science instruction should be increased and deal with real issues. Educators were convinced that the introduction of new ideas in science instruction will refresh and strengthen science curricula."

Institutional and community support: With the support of local school superintendents, principals and teachers, the Whitney Center opened in October, 1990 and offered programs to more than 3,000 visitors in its first year. *Exploring the Water World* was published in late 1991, and has been distributed to more than 14,000 local students. More than 250 teachers have participated in training workshops. The Regional Water Authority supports the operation and maintenance of the Center, while new programs and additional staff are supported by grant funds. To date, the Center has received nearly $100,000 in grant funds which have supported the start-up of an after-school program, summer discovery (an outreach program), science camp and teacher training workshops. Additionally, a series of public meetings were held to gather input from our consumers to provide direction for the development of an education program and associated facilities. A Teacher Advisory Committee was established whose members offered to pilot new programs and communicate the availability of new efforts to their colleagues.

Evaluation/modification strategies: At the completion of all programs, the instructor is asked to complete an evaluation questionnaire, providing us with input on the presentation of the program, applicability to the classroom and suggestions for future endeavors.

Unexpected outcomes: Not reported.

Program promotion and outreach: Promotional brochures are mailed to school superintendents, principals and teachers on our mailing list. Through familiarity with one of our programs and by word-of-mouth, we have achieved a level of success unanticipated with respect to the newness of the program. A full-time staff person, assisted by college interns or part-time staff supported by grants, presents programs and supervises the Center. The Manager of Education is responsible for program development, staff supervision and management of the entire education program, and reports to the Director of Public Affairs.

Materials produced: *Exploring the Water World,* a workbook for students

Keys to success: Not reported.

Future endeavors: Not reported.

Residential camps

Manatees and Mermaids—Manatee Dive Trips to Crystal River

Program goals:

1. To increase participants' awareness and knowledge of manatees and manatee-related issues ("to replace an empty mind with an open one")
2. To increase participants' involvement in protecting manatees
3. To increase participants' skills and enjoyment of boating, snorkeling and underwater photography.

Program setting: The Crystal River area, in Citrus County, Florida.

Target audience: 4-H groups, teachers and nonformal educators, low-income youth, deaf youth, math and science students, and others. This year our dive trip was open to the general public.

Instructional approach: Mandatory planning meeting for participants covers the life history of manatees and their status in Florida, concerns about manatee population, how to avoid harassing manatees, and logistics of the trip. Two weeks before the dive trip, novice divers complete a skin diving session held at a local YMCA or university pool.

Day 1 of dive trip: Attend the Manatee Presentation at Homosassa Springs State Wildlife Park, something of a half-way house for injured manatees. Group has the opportunity to see about ten captive manatees in a natural spring. Tour the rest of the wildlife park to see alligators, Florida panthers, black bears and egrets.

Day 2: Meet at the dive shop at sunrise. Go out on a dive boat to one of the springs on Crystal River, which may have as many as 300 manatees during the winter. In addition to swimming with and photographing the manatees, we collect any debris we find in the river. Lunch is held on the boat. In the afternoon, we do a drift dive from the headsprings of Rainbow River for several miles. Rainbow River, ten miles north of Crystal River, has 1000-ft. visibility, grassbeds, turtles, cormorants, anhingas, bass and bream, Indian pottery shards and artifacts. Dozens of springs feed into it along the way. Present the Manatee Spirit Award, voted on by all participants, to the person who was the most helpful, collected the most debris, and showed the most concern for the manatees.

Day 3: Tour the Native American archeological site and mounds just north of Crystal River; then head home.

Educational content: In addition to learning about manatees and their plight, participants learn about other marine mammals of the Gulf coast, how to identify them, and how to assist a stranded marine mammal. They learn how they can adopt a manatee individually or as a class, how they can purchase a manatee car tag, and how to communicate with their elected representatives about manatee legislation.

Community needs met: There are only about 1,800 manatees left in the state of Florida. This is probably the only opportunity that participants will have to swim with and photograph these gentle giants. It is likely that skin diving with manatees will be discontinued altogether in another ten years, and it is very possible that our grandchildren will hear of manatees only in stories. This is the closest many of us will come to an animal of this size in the wild.

Institutional and community support: Instruction, videos, slides, and resource materials provided by Florida Sea Grant, the Save the Manatee Club, and the Center for Marine Conservation. Free access to pools provided by the YMCA and the University of West Florida. Group rates provided by Homosassa Springs State Wildlife Park. Reduced rates on dive gear and wet suit rental, captain and dive boat, dive flags, etc., provided by Crystal Lodge Dive Shop. Reduced rates on rooms provided by Hayes Motel. Free awards and door prizes provided by the Manatee Toy Company and K-Mart. Free beverages and desserts and reduced-rate dinners provided by Pec's Seafood Restaurant. Scholarships provided to participants by Escambia County 4-H, Catholic Social Services, the John L. Scott Marine Education Center, and the University of West Florida.

Evaluation/modification strategies: Each participant completes an evaluation form at our awards dinner. Participants also, often without encouragement, write poetry, songs and letters to their

Contact information for each program is provided on pages 6-12.

congressional representatives, draw pictures, submit photos and videos, make clay figurines, encourage their parents to buy manatee tags, encourage their schools to adopt a manatee, and lead their own group manatee dive trips the following year. All of this feedback helps us to fine-tune our dive trip. One instructor has dived with the manatees 36 times since 1978, and has led 20 groups on organized manatee dive trips. The youngest participant was 3 and the oldest was 78. Through the years, we have adjusted the dive trip to fit different groups' interests or needs, but this format seems to work best.

Program promotion and outreach: We promote this program each fall in our marine newsletter *Turning the Tide* and in our 4-H newsletter. High school marine biology teachers are also mailed registration information each year that they make available to their students. We work with the university and with social services to arrange scholarships for low income youth. Often special groups contact us to coordinate a dive trip for them in the future.

Materials produced: We have a packet of general information about manatees and other marine mammals that each participant receives. We have produced videos that are composites of numerous manatee dives and drift dives with some excellent underwater footage of the manatees. We have produced a slide program of 160 slides entitled, "Manatees and Mermaids," and often give programs about the manatees and our manatee dive trips.

Unexpected outcomes: We have dived in downpours and in temperatures as low as 34 degrees. Participants like to see at least a few manatees. These are wild animals, however;they do not wait around for us. Liability is always a concern with a high-risk activity like diving. We fortunately have had very few accidents, although one diver fell off the boat and one participant died of heart failure while on board.

Keys to success: Lead manatee dive trips only in January and February, when participants are guaranteed to see manatees in the rivers. Keep group size between 18 and 48. Develop a great working relationship with local dive shops, gift shops, motels, restaurants, state parks and volunteers. Work closely with the manager and staff of the U.S. Fish and Wildlife Service. Constantly remind participants of proper diving etiquette. And finally, keep in mind that we are there to learn about the manatees and are visitors in their home.

Future endeavors: Continue to coordinate one open manatee dive trip each winter. Offer special group manatee dives as the need arises. Offer presentations on manatees and other marine mammals to school groups, community groups and the general public. Continue to attend international manatee and dugong conferences, and offer help and information to manatee conservationists in other countries.

NatureLink—Family Fishing Weekend

Program goals: To teach the importance of protecting natural resources by encouraging hands-on education and personal involvement, and by fostering a commitment to environmental ethics and good stewardship.

Program setting: Outdoors; camps and nature centers

Target audience: Families (in whatever way family is defined)—especially urban and suburban populations that may have limited awareness and exposure to the natural environment. *NatureLink* organizers work in cooperation with other service organizations such as Big Brothers/Big Sisters and NWF state affiliates to recruit families.

Community needs met: Identifies and develops community leaders, recruits family mentor-volunteers willing to share expertise and outdoor experiences; supports community needs by placing the focus on stewardship and the stewardship pledge each participant is asked to make. *NatureLink* is adaptable to suit specific needs, recreational opportunities and resource issues.

Instructional approach: Outdoor skills and awareness of the interrelatedness of ecosystems using nonformal, hands-on learning. Support from mentors helps to reinforce skills and awareness.

Educational content: Many programs focus primarily on fishing. Hands-on lessons are used to teach aquatic ecology lessons, outdoor skills classes, and plant and animal identification, to name a few. Mentors are used to help support and guide the participants through the weekend's education programs. Other themes besides fishing are also used. *NatureLink* is flexible enough for host organizations to tailor the program to their own needs.

Institutional and community support: The primary support comes from a grant from American Greetings. *NatureLink* encourages recruitment of partners from local community groups and among national organizations and companies such as local 4-H groups, Georgia Wildlife Federation, and Wyman Center.

Evaluation/modification strategies: In 1993, *NatureLink* was piloted in three states (Georgia, Colorado and Pennsylvania) to determine potential for success. Cornell University's Human Dimensions Research Unit plans to conduct a two-year study to evaluate *NatureLink's* effectiveness in fostering a conservation ethic.

Unexpected outcomes: Program is in early implementation stage, too soon to assess.

Program promotion and outreach: Host/facilitator training workshops.

Materials produced: Promotional video; *NatureLink Facilitator's Guide,* Program Guide for Volunteers & Mentors; and a *NatureLink* newsletter.

Keys to success: Potential to reach ethnically diverse communities with message of environmental stewardship; intergenerational learning through family involvement; extended impact reaching beyond weekend program through mentor/community follow-up. Mentors will participate in outdoor activities with their families at least 3 times in the year after the *NatureLink* weekend. NWF provides training, support and scholarship money for organizations that elect to adopt the *NatureLink* program

Future endeavors: Not reported.

The Ohio 4-H Sea Camp—An Experiential Outdoor Learning Laboratory

Program goals: As a result of participating in *Ohio 4-H Sea Camp,* campers will:

1. Develop an awareness of the importance of Lake Erie as a commercial, environmental and recreational resource
2. Become aware of the impact of pollution and the introduction of exotic living species such as zebra mussels into the lake environment
3. Become acquainted with, and develop basic skills for lifetime recreational interests and skills related to Lake Erie

Program setting: The Erie County 4-H Camp, located on the north side of Kelleys Island in Lake Erie, 3½ miles north of Sandusky, offers an ideal setting with its sandy beaches, shallow shoreline, unusual geological formations, and a state-owned abandoned limestone quarry.

Target audience: *Sea Camp* is available to all youth, 13–18 years of age. Nearly one-half of the participants attend as recipients of annual standing scholarships from individual Ohio counties. Because the number of teens who are interested in attending exceeds the 80 spaces available annually, an application process is used to select those who will attend *Ohio 4-H Sea Camp* each year. All candidates are asked to write an essay on "Why I want to attend the Ohio Sea Camp" which the staff uses to make its selections. There is no application fee.

Instructional approach: Since 1985, almost 1,000 teens have attended *Ohio 4-H Sea Camp* and experienced the adventure of exploring and enjoying one of Ohio's greatest natural resources—Lake Erie. Through a total immersion program, campers learn about the lake environment and activities that occur on and

around it. The program offers variety in transportation, boating, fishing sites, sports, and food preparation.

There are special events, too. Charter boats carry campers and adult staff to the western end of Lake Erie and into Canadian waters for an all-day charter fishing trip. An hour-long ferryboat ride transports campers to Put-In-Bay where they learn about the International Peace Monument and the Battle of Lake Erie. By bicycle, they tour the island and visit an Ohio Department of Natural Resources fish hatchery, the Lonz Winery, and Crystal Cave.

The cabin counseling staff is composed of adults who are former 4-H sea campers and/or former county 4-H resident camp counselors. The staff includes professionals from the university who serve in leadership and teaching roles. Counselors must be skilled or certified in specific subject areas prior to camp. The program does not provide formal training to the staff.

Educational content: A tightly packed and carefully planned five-day schedule includes sessions where campers explore shoreline ecology, astronomy and navigation, and Lake Erie geology. Campers participate in brief introductory experiences with SCUBA and snorkeling; sailing, canoeing and power boating; casting and fishing, cleaning fish and lure making; recreational and social skill-building activities. Campers must also take responsibility for materials and equipment.

Community needs met: Lake Erie provides a perfect backdrop for youth to learn about and develop simple skills for water sports and water-related recreational activities.

Campers get first-hand experience with a natural resource that was once polluted and unsafe, but that is now important commercially, environmentally and recreationally. They see how time and effort can change outcomes. Young people need to learn that everything is interconnected and how an economic decision can produce environmental effects (for example, the introduction of exotic living species such as zebra mussels into the lake environment.)

Institutional and community support: One of the great strengths of the camp is the teaching staff who are drawn from The Ohio State University, the school systems in the Lake Erie shore counties, COSI-Ohio's Center of Science and Industry, Ohio Department of Natural Resources, Water Safety Division, area water-related businesses and services, as well as independent professionals skilled and licensed in specific water-related areas.

Evaluation/modification strategies: When asked to identify the two most important things they gained by attending O*hio 4–H Sea Camp,* campers consistently cited their new awareness of the importance of environmental concerns and of Lake Erie as a water resource. When asked to identify their two favorite activities, the responses aren't as clear cut. Every activity is someone's favorite.

Unexpected outcomes: Part of the enjoyment of *Ohio 4-H Sea Camp* has been the discovery of agents' hidden talents, interests and connections. From a basic fishing camp in 1984, the camp has built on these special opportunities and widened its offerings to the campers.

Another unexpected outcome has been several campers' broadened attitudes about their ranges of personal "possibilities." Even if their lives go in different directions, they still carry with them the experience of catching fish with the lures they made, eating the fish they caught themselves, rigging a sailboat, and looking for fossils.

Program promotion and outreach: The *Ohio 4-H Sea Camp* is heavily promoted informally by former campers, counselors, and staff. Formally, notices and news releases are sent to each county office for use in newsletters and local newspapers. A promotional display has been developed to help potential campers learn more about the *Ohio 4-H Sea Camp* experience. Sea Camp has become one of the top 4-H activities in the state. First-time applicants are selected first; remaining spaces are offered to returning campers. Returning campers often serve as group helpers in all camp activities such as lure making, fish cleaning and fossil hunting.

Materials produced: *Ohio Sea Camp* utilizes existing educational materials from the Ohio Department of Natural Resources, Sea Grant, 4-H, and commercial sources. A counselor's handbook has been developed.

Keys to success: One of the secrets of the camp's success has been the teaching staff.

Future endeavors: The program changes each year as the dedicated people who plan

and conduct the *Ohio 4-H Sea Camp* work to respond to the comments and suggestions of the campers and resource persons. They are always looking for more effective and exciting ways to deliver their programs.

Texas State 4-H Water Camp

Program goals: The *Texas State 4-H Water Camp* teaches high school youth about the importance of water stewardship. The camp's goal is to instill in young people—water resource management's future leaders—a respect for water resources.

Program setting: The *Texas 4-H Water Camp* is held at the 50-acre George and Opal Bentley 4-H Center in Monahans, Texas. Campers spend one-third of their time at the Bentley Campus; the remaining camp time is spent on excursions and field trips in the area.

Target audience: The camp is open to all students who will be high school sophomores, juniors, or seniors. Admission is on a first come, first serve basis.

Community needs met: Not reported.

Educational content: Participants conduct water-related experiments as group projects in areas such as groundwater protection, urban water use, range water use, the use of saline groundwater and water microbiology.

Instructional approach: To ensure that campers learn as much as possible from field trips, the first full day of camp is spent teaching them about water resource basics. The campers are trained in chemical water analysis and taught vital water statistics. On the first day, the campers are assigned college-level group projects. During the course of the camp each group collects data and gives a final oral report. Field trips include visits to sites where water plays a key role, as in the production of electrical energy and in the recovery of petroleum products. The campers visit farms where state-of-the-art water conservation technology, surge as surge flow and drip irrigation is being used. The West Texas Aquaculture Project in Imperial, Texas, is one of the sites visited. Research there is being conducted on alternative uses of saline water resources available along the Pecos River.

Institutional and community support: The *Texas 4-H Water Camp* is staffed by professionals from several state, federal and private agencies, under the leadership of the Texas Agricultural Extension Service. These professionals come from: Texas Agricultural Extension Service; Soil Conservation Service; Texas Water Development Board; Texas Water Commission; State Attorney General's Office; State Water and Soil Conservation District, Permian Basin Underground Water District; DuPont; Mobil Oil; Chevron Oil; Texaco; and TU Electric.

Evaluation/modification strategies: Pre- and post-test results, as well as project group and tour evaluations. During the course of the camp, each project group collects data and gives a final oral report.

Unexpected outcomes: Tremendous support from local, state and national sponsors. Sponsors support 90% of all who attend the camp.

Program support and outreach efforts: The camp is publicized through every county Extension agent in the state, as well as all Texas Soil Conservation Offices and all water districts.

Materials produced: Each project leader has produced a curriculum guide.

Keys to success: Cooperation of many agencies and organizations to make this camp happen.

Future endeavors: The *Texas 4-H Water Camp* is committed to preserving and protecting Texas water resources for future generations. Educating young people today can help achieve that goal. An endowment is being established that will provide the camp with a permanent water testing laboratory, increased dormitory space and an on-site water conservation testing unit.

In the future, there will be four sessions of Water Camp for youth each summer, and one for teachers and other educators. We will need to increase the volunteer base to supply these needs.

School enrichment

Active Watershed Education, "It's AWEsome!" (formerly The Pawcatuck Watershed Education Program)

Program goals:

1. To provide students with a relevant and empowering educational experience about an aspect of the environment
2. To tie classroom concepts to real life experiences
3. To teach students how to take action on community issues.

Program setting: School enrichment (includes both classroom instruction and field experience) and Community Service Learning (program is dynamic and evolving). Southern Rhode Island Conservation District (SRICD) encourages teachers to work with community leaders and watershed associations to implement community projects.

Target audience: Youth, grades 5 through 8

Instructional approach: Based on the environmental education model developed by Hungerford, et al (1980), the program combines classroom sessions and field experience to further instill the water concepts. The curriculum design encourages students to use higher level, critical thinking skills in the final evaluation and debate. The curriculum provides a variety of models to demonstrate important concepts. Such concepts include: the definition of a watershed; the relationship of the participants to the watershed; the interconnection of groundwater and surface water, wetlands; and nonpoint source pollution and its control.

Educational content: The *AWEsome* program is comprehensive, with each unit building upon the previous one. Students first learn basic ecological concepts about the watershed, and then begin to understand issues and how conflicting values give rise to problematic issues. The units culminate in a Citizen Action project where students learn investigation and evaluation skills in dealing with community water issues. Unit topics center on watersheds, water and soil resources, wetland ecology, point and nonpoint pollution, and a simulated public hearing and citizen action. Students select a current issue in their community for the discussion and debate during the public hearing.

Community needs met: Initially developed because of the need for a locally-based, comprehensive environmental education (EE) program, the *AWEsome* program improves upon existing programs by providing a vehicle for teachers to bring education about local resources to students in the community. During the initial development of the curriculum (1991), SRICD invited several representatives from local organizations to discuss current EE programs available to teachers and students throughout the state. Participants agreed that existing EE programs in Rhode Island lacked a holistic approach and did not provide for adequate follow-up with students to determine the level of comprehension or retention of the material. The goal was to tie concepts the students learned in the classroom to real-life experiences. Through consultation with other EE program providers, the *AWEsome* program was developed to address these concerns with a curriculum guide and intensive teacher training workshops. Programs first concentrated on the Pawcatuck watersheds in Rhode Island, but are expanding to other watersheds in the state.

In 1990, the USDA funded the Pawcatuck Watershed Project in southern Rhode Island to address the problem of potential sources of nonpoint pollution. SRICD became involved in building knowledge and interest in conserving watershed resources. It initiated the watershed education program in an attempt to teach youth about the resources in the area, and leave them with the skills needed to address concerns in their communities.

Institutional and community support: The Southern Rhode Island Conservation District relies on its partners to provide training to new employees and assistance with teacher workshops, identify community needs, organize student activities, promote the program, raise funds, etc. Partners

Contact information for each program is provided on pages 6-12.

include the Natural Resources Conservation Service (formerly the Soil Conservation Service), other conservation districts, the Wood-Pawcatuck Watershed Association, RI Department of Environmental Management, Town Planners, University of Rhode Island, local corporations and virtually all other EE providers in the state (non-profits).

Evaluation/modification strategies: Pre- and post-tests results, workshop evaluations, University of Wisconsin–Extension Environmental Resources Center evaluation, direct feedback from teachers using the program (many teachers who enroll in workshops elect to earn graduate credit through URI and are required to provide feedback as part of a final class paper).

Unexpected outcomes: Tremendous support from local communities for existing programs and requests from other communities and teachers to bring the program to their schools.

Program promotion and outreach: Teacher training workshops, EE conferences, media, Town Planners, partners support and fundraising campaigns.

Materials produced: ***A**ctive **W**atershed **E**ducation Program Curriculum Guide*, 1993, revised August 1994. Cost: $40 plus $5 for shipping and handling.

Keys to success: While this project is currently limited to the Pawcatuck Watershed, it has potential for wide application to other watersheds. An *Appendix* accompanies the curriculum guide with techniques and suggestions for adapting the program to different locations. In Rhode Island, SRICD is working to revise the curriculum with state and town partners to bring the program to other watersheds.

Future endeavors: The Southern Rhode Island Conservation District envisions a long-range program in which this curriculum provides the basis for environmental programs throughout the junior high or middle school science curriculum. SRICD is working with schools, URI, and other EE providers to develop a river/watershed monitoring network for all students in selected watersheds. Students from different areas in the watershed could compare and discuss their monitoring results. SRICD is also working with other EE programs in the state. In addition, SRICD is just beginning to work with the RIDEM and RI Department of Education to draft state guidelines for EE programs, which will include a comprehensive training program for teachers (this was agreed upon, but will happen only if funding is secured).

Adopt-A-Lake

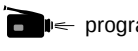
Program goals: *Adopt-A-Lake* is a youth program designed to provide both young people and adults with a better understanding of the aquatic ecosystem through hands-on activities. Specifically, *Adopt-A-Lake* has four primary goals:

1. To increase young people's awareness of the value of Wisconsin's inland lakes
2. To empower youth to participate in hands-on lake protection activities
3. To develop an understanding of lake management and the social dynamics of lake issues in the next generation of lake leaders and citizen volunteers
4. To build links between youth and adults on lake issues, and to stimulate adults to take action on lake management issues.

Through *Adopt-A-Lake* projects, ranging from water quality testing to litter clean-ups to lake use surveys and other activities, youth gain the skills and knowledge necessary to become leaders and informed environmental citizens. The *Adopt-A-Lake* program will provide direction and resources to teachers and youth leaders interested in adopting a lake.

Program setting: *Adopt-A-Lake* program settings can range from classrooms to lake sites, depending on the group's objectives and the resources available.

Target audience: *Adopt-A-Lake* targets youth (K–12) in both school-affiliated youth groups (specific classrooms, grades, and/or environmental clubs, among others), and other youth groups, for example, 4-H clubs or Boy/Girl Scouts.

 program featured in training video

Instructional approach: The *Adopt-A-Lake* program is interdisciplinary in scope with strong leadership development and action components designed to empower youth to be active leaders in lake protection. Student-initiated projects and participation in the planning process, including training workshops, is encouraged. Both formal and non-formal settings are appropriate, with emphasis on hands-on activities.

Educational content: This program attempts to provide both youth and adults with a better understanding of lakes and the social dynamics involved in protecting them. Participants will not only learn more about lake ecosystems, but will also examine other facets of lake issues—social, economic, historical, cultural, ecological and political. After young people have developed a better understanding of the lake in their community, the program moves on to the importance of taking action; for example, making presentations, writing articles, conducting litter clean-up activities, planning and implementing educational workshops, or publishing materials about lake issues. Such activities are designed to improve students' decision-making and critical thinking skills, and give them the knowledge and confidence to become leaders in lake protection.

Community needs met: *Adopt-A-Lake* projects focus on lakes within the youth group's community. Consequently, projects can potentially increase community members' awareness of the importance of lakes and activities which ensure the protection of these local natural resources. Likewise, this program links youth with community "lake leaders," using the "Master Teacher" concept. "Master Teachers" are individuals involved in lake protection through local lake associations, lake monitoring activities, etc. These individuals and the lake associations can provide resources for *Adopt-A-Lake* projects while also giving youth insight into possible avenues of affecting change. These community members are also excellent role models for youth leaders. Lake associations are often involved in community educational outreach; their work with *Adopt-A-Lake* projects can help with such outreach.

Institutional and community support: There is tremendous support, both institutional and community-based, for *Adopt-A-Lake,* primarily due to its unique affiliation with various institutions and the fact that there are roughly 15,000 lakes in Wisconsin—a crucial resource to be protected for future generations. *Adopt-A-Lake* is part of the Lakes Management Partnership, a multi-faceted partnership among University of Wisconsin-Extension, the Wisconsin Department of Natural Resources (DNR) and concerned citizens, primarily represented by the Wisconsin Association of Lakes and its local affiliates.

Evaluation/modification strategies: We receive input from various sources, both institutional and community-based, about the needs and interests of youth and youth leaders, and we try to adjust the program accordingly. Likewise, evaluation processes are a strong part of *Adopt-A-Lake* staff activities, particularly with regard to workshop content and structure. Teachers, youth leaders, and youth are encouraged to include evaluation processes throughout their projects to ensure that their projects are effective in meeting the group's objectives.

Unexpected outcomes: We have had a wonderful response to the *Adopt-A-Lake* program. Young people, teachers, youth leaders, and other community members have all shown support. It has been gratifying to work with people who are truly interested, rather than having to "recruit" groups for the program!

Program promotion and outreach efforts: Newsletter articles (*Lake Tides*, 4-H publications); local news sources; attendance at local, state, regional, and national conferences which deal with lakes, environmental education, etc.; *Adopt-A-Lake* programs at various Wisconsin Lake Fairs; regional *Adopt-A-Lake* workshops for interested youth leaders, teachers, youth and community members.

Materials produced: *Adopt-A-Lake Project: A Resource Guide for Leaders;* workshop packet for participants including materials on specific water quality monitoring activities, arts and crafts activities; plant and aquatic insect identification keys; other resources people can use in their lake projects.

Keys to success: One of the primary keys to success in this program has been allowing the students to participate fully in the project, from its conceptualization to its actual implementation. The more students are involved in the process, the more likely the activities will be successful, with the added benefit that students will feel a degree of "ownership" about the project.

Another key element to *Adopt-A-Lake's* success is the variety of resources and support programs available to participants, from Extension to DNR educators and researchers, to citizen groups like the Wisconsin Association of Lakes. Likewise, programs such as the DNR's Self-Help Lake Monitoring Program are willing to commit time and energy to *Adopt-A-Lake* through their organizations. In the case of the Self-Help Lake Monitoring Program, DNR staff have been willing to train teachers and youth leaders in water monitoring techniques so that the students can then begin collecting water quality data for the state. Such "real life" experinces can help both youth and adults involved in *Adopt-A-Lake* projects feel their efforts are worthwhile.

Future endeavors:

1. Continue to build support for *Adopt-A-Lake* activities throughout Wisconsin
2. Prepare and publish interdisciplinary *Adopt-A-Lake* curricular materials
3. Continue to identify and train "lake leaders" throughout the state to become regional contacts for youth groups interested in "adopting" a lake.

Adopt-A-Watershed

Program goals: Help students develop a land ethic—a sense of stewardship toward their environment and community—and give them the skills to make educated, informed decisions regarding wise resource management.

Program setting: School-based with emphasis on community projects

Target audience: Grades K–12

Instructional approach: Thematic, unit-based K-12 science program.

Education content: Students have the opportunity to observe up to 13 years of change in their watershed. Kindergarten students adopt a watershed and follow it as a focal point of their science curriculum through grade 12. The watershed becomes a living laboratory in which students participate in hands-on activities, making science directly applicable and relevant to their lives. Students at the younger grade levels focus on observation and appreciation, in the middle grades on relationships and interactions, and in the upper grade levels, students discover how science impacts watershed management, policies and regulations.

The following elements make up each watershed unit:

1. Hands-on, activity-and project-based classroom lessons relating the watershed topics to science concepts appropriate to the science curriculum for that grade level, including cross-curriculum connections such as art, language arts, math, and social science
2. Long-term field studies which are repeated at specified grade levels so that data, passed on through a computer database, can be compared and changes recognized.
3. Restoration projects which help students feel a sense of caring for their watershed.
4. Community action projects in which students communicate what they have learned about their watershed to their community

Community needs met: Watershed education and community collaboration.

Institutional and community support: The program develops partnerships between schools, agencies, organizations, industry and community members. These partners provide services and technical assistance. The program is a conduit for schools, agencies and industry to interact cooperatively to work toward solutions for controversial issues.

Evaluation/modification strategies: Authentic assessment that includes portfolios and journals are used to assess student outcomes.

Unexpected outcomes: Models collaborative skills useful for other community-based concerns.

Program promotion and outreach efforts: Presentation at conferences, community groups and meetings. Articles in magazines and newsletters to promote the pro-

gram. We implement the program only in areas where we are invited.

Materials produced: 32 thematic units written for grades K–12.

Keys to success: The entire teaching staff, or only one teacher, can embrace the program. Each unit stands on its own, and can easily be incorporated into existing programs. The curricula is based on the most current California state science framework and correlates with the history/social science, language arts and math frameworks.

Future endeavors: *Adopt-A-Watershed* will begin national implementation in 1997. Currently, students can share and compare data, and find solutions to complex issues via a telecommunications network.

Hooked On Fishing, Not On Drugs

Program goals:

1. Educate students about drug awareness
2. Provide each student with an alternative to alcohol and other drug abuse
3. Help kids learn how to say "no" to drugs through good communication skills
4. Become more aware of environmental issues
5. Introduce fishing to students as a lifetime activity

Program setting: School and field experience

Target audience: Grades 3–5

Instructional approach: Classroom presentations, lessons, assemblies and field trips. The "good communication skills" taught are ways to say "no" to friends and peer pressure. Nearly 80% of students in the program currently fish or have fished in the past.

Educational content: Students are taught basic angling skills such as identifying clean, safe areas to fish and how to practice catch and release techniques. The program offers youth positive choices. They can fish by themselves, with a partner, or with their families. Some participants have said fishing fills their spare time with something enjoyable. If people are content, they are less likely to use drugs.

Program activities are integrated into the curriculum through essays and bulletin board messages. One guidance counselor wrote a song that the music department uses in its curriculum; the art department makes and decorates the halls. The library displays books and materials for student use, and in computer classes, students write their essays while mastering computing skills.

Community needs met: Drug offenders are a community concern. And East Troy does not have a lot of activities for growing, active youth. Fishing offers them something constructive to do.

Institutional and community support: We receive program support from the D.A.R.E. officer (a police liaison), local and statewide anglers, and local and statewide businesses (such as Gander Mountain). The cost to conduct the program hovers at around $500 per year. This covers transporation to fishing sites, Future Fisherman's Foundation educational materials, and food supply to fishing trips. Community involvement includes: a local sporting club that helps with angler education; monetary donations; parent chaperones; and media advertisements on local radio stations. All support staff (cooks, janitors, secretaries and bus drivers) are knowledgeable about and help with the program. Classroom teachers integrate the program into their daily lessons.

Evaluation/modification strategies: Yearly reviews and surveys

Unexpected outcomes: Great success; this particular program has become a national success story.

Program promotion and outreach: Local media, local radio station has broadcasted at the all-day fishing event. Mentioned in a national newspaper article.

Materials produced: Brochures, photographs and a videotape

Keys to success: Support from school personnel; family and community support and involvement.

Future endeavors: To continue and eventually add other grade levels to our curriculum. But most of all, to gain county or even state support for a day devoted to *Hooked On Fishing, Not On Drugs.*

program featured in training video

Kids In Creeks: A Creek Exploration and Restoration Program

Program goals:

1. To engage students in real science and make them aware of the natural world near their homes and schools
2. To provide opportunities for students to feel proud of their neighborhoods
3. to give students an awareness of the sources and impacts of water pollution
4. To help young people develop values related to environmental stewardship and to enhance their problem-solving and critical thinking skills
5. To stimulate thought about the effects our lifestyles have on the environment

Program setting: School enrichment (includes both classroom instruction and field experience)

Target audience: Grades K–12

Community needs met: Until now, urban creeks have been largely overlooked in environmental education. *Kids in Creeks* is the first comprehensive educational program in the Bay Area that focuses on creek studies as a way of introducing students to urban runoff pollution. Most teachers participating in the program have conducted an action project with their class, or have taught the students about creek ecology and urban runoff. Through these projects, *Kids in Creeks* has raised students' and the public's awareness and focused attention on local environmental issues. Creek-based coalitions between schools and communities have carried out projects such as storm drain stenciling, creek clean-ups, and *Adopt-a-Creek*.

Instructional approach: *Kids in Creeks* is a student-driven, action-oriented program. Teams of teachers are selected from elementary, middle, junior high and high schools throughout Alameda County to participate in the workshops. These teachers are provided with curriculum, equipment kits (on short-term loan), and assistance in conducting projects.

Educational content: In the 2½ day workshops, teachers learn to identify aquatic insects, sample water, conduct animal tracking activities, stencil storm drains, use mapping to make discoveries about nearby creeks and watersheds, and teach about creeks across the curriculum. The first day and a half, participants spend time at a creek site to give them the opportunity to familiarize themselves with a natural setting. During the last day, the workshop is held at a school to expose teachers to the challenges they will face while teaching about urban creeks.

Institutional and community support: The Alameda County Clean Water Program underwrites *Kids in Creeks*. The Contra Costa Clean Water Program, the U.S. Fish and Wildlife Service, and the San Franscico Bay Program are also among more than two dozen funders of *Kids in Creeks*.

Evaluation/modification strategies: Every six months, the Estuary Institute conducts a phone survey of teachers who have participated in *Kids In Creeks*. The surveys tells us which projects teachers have used with their students, and what parts of the program they found particularly good. The Institute then tries to respond to the teachers' changing needs by changing elements of the workshop. Certainly, the most important measure of success is the number of teachers who feel motivated to get out of their classrooms with their students and teach about creeks. Most teachers who have participated in *Kids in Creeks* have conducted action projects. Many have applied for funds to get their students out of the classroom to plant native plants, conduct water quality monitoring, or just clean up their local creek!

Unexpected outcomes: The response to *Kids in Creeks* has been astonishing. Over 300 teachers have participated in the 20-hour workshops, and those continue to fill up rapidly. *Kids in Creeks* has spawned Teacher Action Grants Programs in two counties. These are grants offered only to teachers who have participated in Kids in Creeks, and that support projects on creeks located near their schools. To date, $21,000 has been distributed to 36 *Kids in Creeks* participants. The program recently received a statewide award from POWER (Public Officials for Water Education Reform) acknowledging the devel-

opment of an innovative environmental education program. *Kids in Creeks* has also received national attention, receiving an award from the Environmental Protection Agency in 1994 for its contribution to Alameda County's nationally acclaimed storm water control program.

Program promotion and outreach: The *Kids in Creeks* program is most effectively promoted by word of mouth. Teachers who have attended a workshop encourage their peers to participate. For every workshop, press releases and camera-ready art are sent to the local newspapers, radio stations and environmental newsletters. The Insitute also sends fliers to each school principal in participating districts and to all 900 educators currently in our database. The Education Program Coordinator and the Education Director also give slide show presentations to schools upon request. Other program promotion and outreach efforts include sponsoring the annual *Kids in Creeks* reunion, coordinating afterschool and weekend field trips to local creeks, and publishing a quarterly newsletter containing stories, artwork, curriculum ideas and upcoming events of interest to participants.

Materials produced: *Kids in Creeks: A Creek Exploration and Restoration Program, Leader's Guide,* cost: $30 (available to workshop participants only).

Keys to success: Teachers who attend the *Kids in Creeks* workshops receive curriculum, equipment kits and assistance with action projects. Workshop participants have access to a lending library that consists of curriculum, a creek and water quality video collection, a full-body salmon suit, stream inventory kits, native creekside plant identification sheets, maps and slides, and lists of local organizations interested in working with youth groups.

Future endeavors: Create a student-based water quality monitoring program for grades 3–12.

Project FUR (Fighting Urban Runoff)

Program goals:

1. Promote public awareness of negative impacts of urban stormwater runoff on local water bodies
2. Develop civic action projects to reduce nonpoint source pollution (NPS).

Program setting: Metropolitan area of greater New Orleans

Target audience: Elementary to high school students; general public

Instructional approach: A Speaker's Program made up of students, grades 11–12 giving presentations on wetlands, urban runoff and water quality. Students also staff a booth at environmental fairs and conductstorm drain stenciling, used motor oil filter recycling, and water quality monitoring projects.

Educational content: Through classroom or group presentations, activities and water quality monitoring, students learn about wetlands ecology, watersheds, nonpoint source pollution, the effects of NPS on aquatic ecosystems, the geography/geology of Lousiana and New Orleans, and Gulf of Mexico ecosystems.

Community needs met: Lake Pontchartrain provides recreation, seafood and industrial uses. The surrounding land is used for agricultural, industrial and residential purposes. Education was necessary to raise the public's awareness of the effects of land use on water quality. Students conducted civic action projects to reduce urban runoff into the lake ecosystem.

Institutional and community support: Holy Cross School; Lake Pontchartrain Basin Foundation; Lousiana Department of Environmental Quality; and other grants and in-kind services.

Evaluation/modification strategies: Students submit water quality data to the Lousiana Department of Environmental Quality; student journal entries; and the number of returned used motor oil filters.

Unexpected outcomes: Although not a goal of the program, students became interested in environmental careers; the community extended support and recognition; students received local, state, and national awards and honors. *Project FUR* was listed in *Renew America's Environmental Success Index* 1992.

Program promotion and outreach: Speakers' program involving school and civic group representatives; students staff booths at area environmental fairs.

Materials produced: Flyer and information sheets about urban runoff noting the effects on Lake Pontchartrain ecosystem.

Keys to success: Dedicated students who work, work, work; changes in leadership teams as students graduate.

Future endeavors: Wetlands ecology service learning project; *Project F.U.R.* team leaders will participate in field exercises to experience wetland ecology. They will teach their peers the basics of wetlands ecology on subsequent field trips. We hope to expand the program to teach elementary and middle school students in the same manner.

Project WET (Water Education for Teachers) Idaho

Program goals: The goal of the program is to facilitate and promote water resource awareness, appreciation and knowledge through statewide implementation of *Project WET Idaho's* water education curriculum.

Program setting: Classroom-based instruction enhanced with some field experiences.

Target audience: Grades K–12

Instructional approach: Training workshops for Idaho teachers.

Educational content: *Project WET Idaho* is continuously achieving its goal through conducting workshops and training sessions throughout the state, developing new water education materials and acting as a state water education resource. In the workshops, participants learn strategies for teaching awareness and appreciation of water resources and how to integrate water-related topics into the curriculum. The program covers topics such as the properties of water, point and non-point source pollution prevention, water treatment and conservation. The program is designed to be a "hands-on" learning experience. Participants are trained in the use of the Project WET teaching aids, including the Ground Water Flow Model, the Liquid Treasure History Trunk, EnviroScapeTM, the Water Use Simulator and the Project WET Idaho Activity Guides.

Community needs met: *Project WET Idaho* is a statewide, interdisciplinary, supplementary water education program for Idaho educators and young people. In its first year of existence, *Project WET Idaho* has established itself as a source of water education information materials and teacher training for the state. The increasing demand for *Project WET Idaho* workshops and materials is evidence of interest in water education from the state's educators and youth.

Institutional and community support: *Project WET Idaho* is administered by the Idaho Water Resources Research Institute at the University of Idaho. Additional support is provided by Eisenhower Funds and other state and private organizations interested in water.

Evaluation/modification strategies: There are two techniques that Project WET uses for evaluation. A course evaluation is requested of each of the workshop participants at the end of each workshop. Additionally, each participant is required to complete at least three of the WET activities with their students in the normal educational setting. Teachers are then required to send a summary report to the Project WET coordinator stating which activities they tried, any modifications they made for their classes and an evaluation of the activity.

Unexpected outcomes: Not reported.

Program promotion and outreach: Through state education conferences, newsletters and by word-of-mouth.

Materials available: The Comprehensive K-12 and K-3 Curriculum Guides; *The Streamwalk for Teachers Manual;* 15 groundwater flow model trunks; 4 "Liquid Treasure History" trunks; The Water Use Simulator computer program; The Resource Library and Resource List; Water Quality Test Trunks; EnviroScape.TM

Keys to success: Hands-on teacher training and the availability of teaching aids.

Future endeavors: We intend to incorporate the new National Project WET materials with the best of the *Project WET Idaho* materi-

als to give *Project WET Idaho* a new focus on watersheds. The watershed approach will provide a backbone for content and delivery of the *Project WET Idaho* workshops. A statewide facilitator network will also be established, so that we can increase the number of workshops presented per year.

Testing the Waters: Linking Students and the Watershed through Technology

Program goals:

1. To provide training for teachers in riverine system ecology, Milwaukee River issues and proposed intervention strategies to improve the watershed
2. To establish a network of high schools collecting and reporting water quality data through a central computer system
3. To develop students who have knowledge of local environmental issues, competency in using scientific equipment and research methods and awareness of potential careers in science, computer science and natural resources
4. To develop citizens who are able to take active and responsible steps in resolving complex socio-environmental issues.

Program setting: Classroom instruction and river monitoring

Target audience: Middle and high school students within the Milwaukee River Watershed

Instructional approach: Four area nature centers each work with approximately 9 teachers and their classes for a total involvement of 34 high schools and 6 middle schools. The high school teachers along with 4 students they choose attend a 2-day training workshop in the fall.

Community needs met: *Testing the Waters* offers young adults an educational opportunity to become more aware and knowledgeable about river systems. Youth develop community action skills and learn the importance of participation in addressing and resolving environmental issues.

Institutional and community support: Along with Riveredge Nature Center, the program receives financial and in-kind support from the following organizations: Wisconsin Department of Natural Resources; Milwaukee River Priority Watershed Program; Milwaukee County Extension; Schlitz Audubon Center; Havenswood Environmental Awareness Center; Wehr Nature Center/Extension; and the Milwaukee Metropolitan Sewerage District, Southeastern Wisconsin Regional Planning Commission, and the University of Wisconsin–Extension. All fund raising takes place locally.

Educational content: During the school year, teachers and students monitor the river as part of their science class experience. Ten different parameters are measured and a water quality index for each site is determined. The students communicate their results through modems and a bulletin board called Omnitest at University of Wisconsin–Milwaukee. In April, all students are invited to attend a student Congress where they discuss results and strategies for action. Classes encourage students to take appropriate action to improve water quality. Action projects range from clean-ups to Mud Patrols (looking for construction erosion ordinance violations) to attending public hearings.

Program evaluation/modification strategies: Likert-style questionnaires for teachers and students at year's end.

Unexpected outcomes: Many exciting student action projects; national recognition for some.

Materials produced: Milwaukee River curriculum; poster; and video.

Program promotion and outreach efforts: Students and teachers are recruited through meetings with school district officials and principals. Other promotional efforts include conference presentations and word-of-mouth promotion. The annual Kiwanis Milwaukee River Cleanup increases community awareness of the river and recognition for Testing the Waters.

Keys to success: Paid staff; network of cooperating agencies; support of school districts; and excellent funding support.

Future endeavors: Heavy metals and PCB testing starting 1994–95; plans to implement a larger middle school program in 1994–95 that is similar to the current high school program.

Yahara Watershed Education Network (and *Summer Heron Institute*)

Program goals: Establish an ongoing support network of educators, researchers, and public policymakers interested in long-term ecological research on local watersheds; improve science education, integrate environmental and science education, and improve public policy decision-making on land and resource management.

Program setting: *Summer Heron Institute* at the biological field station on Lake Wingra; networking throughout academic year with area schools, other field sites, and informal education centers.

Target audience: K–16 educators; informal educators; professional researchers in public and private arenas; public-policy makers concerned with resource management decisions.

Community needs met: Need for bringing together various sectors interested in land use, water quality, and watershed study and management; need for improved science education.

Instructional approach: Collaborative research that combines "student inquiry" and "teacher-as-researcher" approach; collaborative evaluation and development of instructional approaches; shared leadership.

Educational content: Teacher training in water quality; ecological research; field sampling methods; land use and watersheds.

Institutional and community support: Eisenhower Science and Mathematics Education Grant Program; UW Center for Biology Education; UW Institute for Environmental Studies; UW Teacher Enhancement Program; Edgewood College; DNR; UW–Extension; area schools and school districts; Madison Children's Museum.

Evaluation/modification strategies: Evaluation of changes in the way teachers conduct their classes; evaluation of extent of ongoing collaboration and networking among educators, researchers and public policymakers.

Unexpected outcomes: Widespread interest among nonformal as well as formal educators. There is reluctance among some teachers to see themselves as scientists.

Program promotion and outreach: Participating teachers expected to conduct in-service training for their colleagues and recruit new participants; workshops by participating teachers and coordinators; annual Yahara Watershed Education Fair.

Materials produced: Newsletter; annual journal; informational research reports from *Summer Heron Institute.*

Keys to success: Teacher involvement in program design and evaluation; support from a large number of sectors.

Future endeavors: Expand number of participants; connect all participants via computer network; expand collaborative research projects.

program featured in training video

EDUCATING
YOUNG PEOPLE
about
Water

Appendices

APPENDIX A

Definitions of nonformal youth water education settings

CAMPAIGNS— Promotional efforts to advertise designated events or programs. Campaigns are designed to produce a specific outcome, such as community action, education, or increased public awareness of a particular issue.

CLUBS—Water education programs that adopt a club's goals and structure, and may complement school education goals. A club may organize fishing trips, develop displays for a county fair, conduct water monitoring, or visit a wetland.

COMMUNITY SERVICE LEARNING—Refers to education-based programs and projects that emphasize learning by taking action in the community. Water service learning projects focus on stewardship, and provide an active educational component in areas such as ecology, watershed land use, risk and decision-making skills. These activities may benefit the community ecologically, aesthetically, or economically. Projects may include water monitoring, clean-up, restoration (streambank stabilization, seed collecting and planting), storm drain stenciling and career planning.

DAY CAMPS/SUMMER EDUCATIONAL PROGRAMS—Activities organized as part of community-based recreation programs. They may or may not be held at established camp settings.

FESTIVALS/FAIRS—Usually one-day events where children visit several stations or booths set up for hands-on activities that focus on water and water use issues. Such activities might include observing demonstrations, answering questions, playing games, role playing, practicing science investigation, or examining career planning/options. Festivals or fairs may be held during school hours or during the summer. Those held in cooperation with schools usually include some background activities at the school.

MUSEUMS—This category includes water-related exhibits designed for youth and located in public museums, or in museums emphasizing water education (found in waterfront or coastal areas). Water education topics may include water conservation, natural history, geology, regional flora and fauna and habitats.

NATURE CENTERS/ENVIRONMENTAL EDUCATION CENTERS—Water-related education programs held at established centers in parks, nature reserves or other public access property. Youth groups come to the centers to experience natural water environments.

ORGANIZATIONS—Adopting youth water education as their operational goal or mission, organizations provide funding, educational materials, training workshops, or sponsor water-related events.

RESIDENTIAL CAMPS—Programs held at established outdoor education settings where water education is the primary focus or an integral component to the environmental education program.

SCHOOL ENRICHMENT—Water education programs that enhance an existing school curriculum or classroom experience. Participants are school groups or are recruited through the schools.

Compiled by Kelly Warren and Elaine Andrews, University of Wisconsin–Extension Environmental Resources Center, Madison, WI

APPENDIX B

Water education topics cross-referenced with programs

If you are looking for ideas to help develop programs about specific topics, then this list is for you. Use the Directory of Programs on pages 6-12 to locate the program descriptions.

Coastal/marine

- 4-H Watershed Project: From Ridges to Rivers
- Mermaids and Manatees—Manatee Dive Trips to Crystal River
- Sarasota Bay and Midnight Pass exhibits

Ecological concepts

- Active Watershed Education, "It's **AWE**some!"
- Bronx River Restoration Project
- Ohio 4-H Sea Camp

Fishing programs

- Fishing for 4-H
- Hooked on Fishing, Not on Drugs
- MinnAqua Angler Education Program
- NatureLink—Family Fishing Weekend

Groundwater

- Children's Groundwater Festival
- Groundwater in Nature

Lakes

- Adopt-A-Lake
- Georgia Waterway Cleanup
- Leap Into Lakes museum exhibit
- Ohio 4-H Sea Camp

River study

- Austin Youth River Watch Program
- SOAR (Summer Orientation about Rivers)
- Testing the Waters
- Water Works Laboratory and Exhibit

Science inquiry/research based

- Bronx River Restoration project
- 4-H Watershed Project—From Ridges to Rivers
- Texas State 4-H Camp
- Yahara Watershed Education Network

Stewardship/restoration

- Adopt-A-Lake
- Adopt-A-Stream
- Adopt-A-Watershed
- Bronx River Restoration Project
- Duwamish River Youth Initiative
- Georgia Waterway Cleanup
- Give Water a Hand
- SOAR (Summer Orientation about Rivers)

Stream study

- Adopt-A-Stream Foundation
- Kids in Creeks
- Save Our Streams

Urban outreach

- Austin Youth River Watch Program
- Bronx River Restoration Project
- Duwamish River Youth Initiative
- Hooked on Fishing, Not on Drugs
- NatureLink—Family Fishing Weekend
- Sarasota Bay and Midnight Pass exhibits
- Water Works Laboratory and Exhibit

Water pollution

- America's Clean Water Foundation
- Project FUR (Fighting Urban Runoff)
- Ohio 4-H Sea Camp

Water quantity/conservation

- 4-H Water Wise Day Camps
- Blue Thumb Campaign
- Eyes on Conservation: Water Works
- Project WET Idaho
- Texas State 4-H Water Camp
- Whitney Water Center

Watersheds

- Active Watershed Education, "It's **AWE**some!"
- Adopt-A-Stream
- Adopt-A-Watershed
- 4-H Watershed Project: From Ridges to Rivers
- Leap Into Lakes museum exhibit
- Save Our Streams
- Yahara Watershed Education Network

Wetlands

- Wonders of Wetlands
- Project ECO—Environmental Curriculum Outdoors

Youth development/ social needs

- Austin Youth River Watch Program
- Bronx River Restoration Project
- Duwamish River Youth Initiative
- Hooked on Fishing, Not on Drugs
- Texas State 4-H Water Camp

APPENDIX C

Program profile

Program name:

Institutional affiliation:

Address:

Phone:

Contact:

Program goals:

Program setting:

Target audience:

Instructional approach:

Education content:

Community needs met:

Institutional and community support:

Evaluation/modification strategies:

Unexpected outcomes:

Program promotion and outreach:

Materials produced:

Keys to success:

Future endeavors:

If you would like to share information about your program or others, complete and return to Educating Young People About Water, University of Wisconsin-Extension, 216 Agriculture Hall, 1450 Linden Drive, Madison, Wisconsin 53706. Telephone 608/262-0020 or fax 608/262-2031.