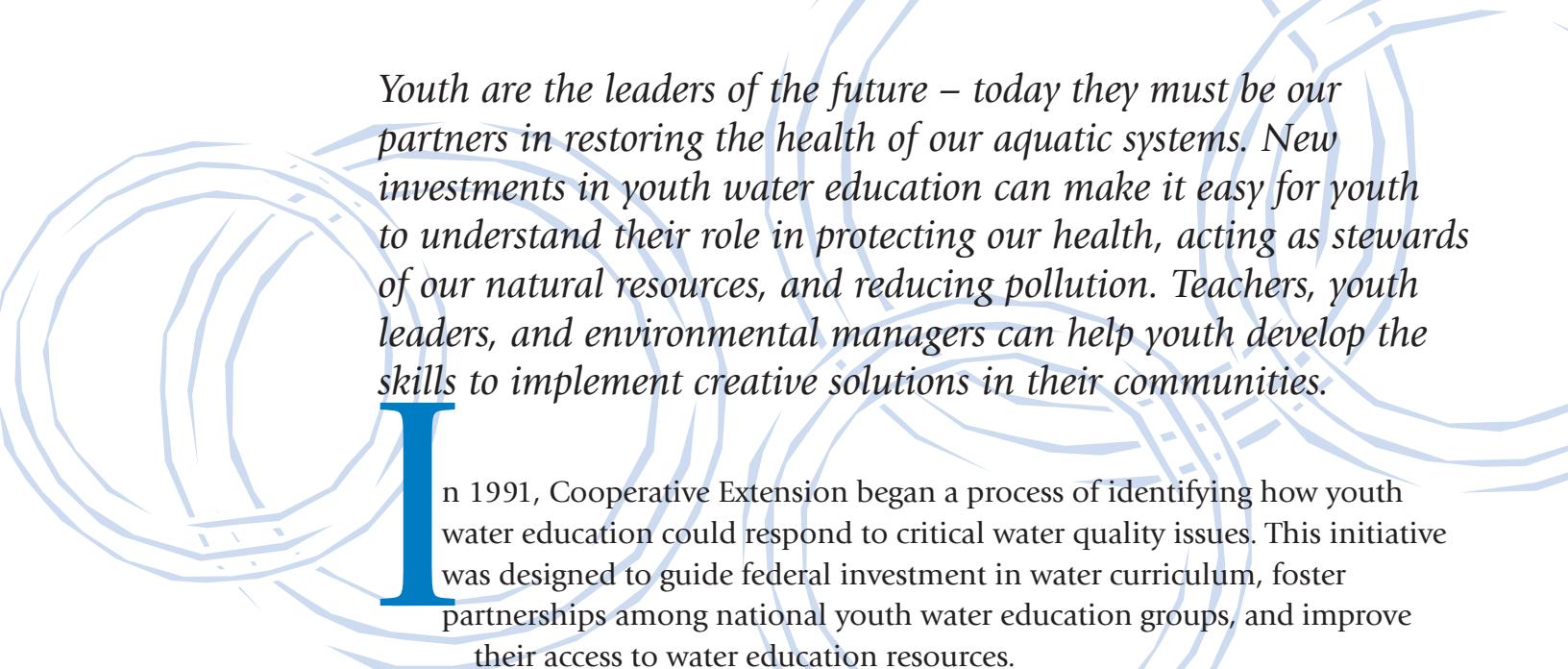


Youth as Partners in Water Education

A Cooperative Extension Service
investment in community-based
environmental education

1991-1998



Youth are the leaders of the future – today they must be our partners in restoring the health of our aquatic systems. New investments in youth water education can make it easy for youth to understand their role in protecting our health, acting as stewards of our natural resources, and reducing pollution. Teachers, youth leaders, and environmental managers can help youth develop the skills to implement creative solutions in their communities.

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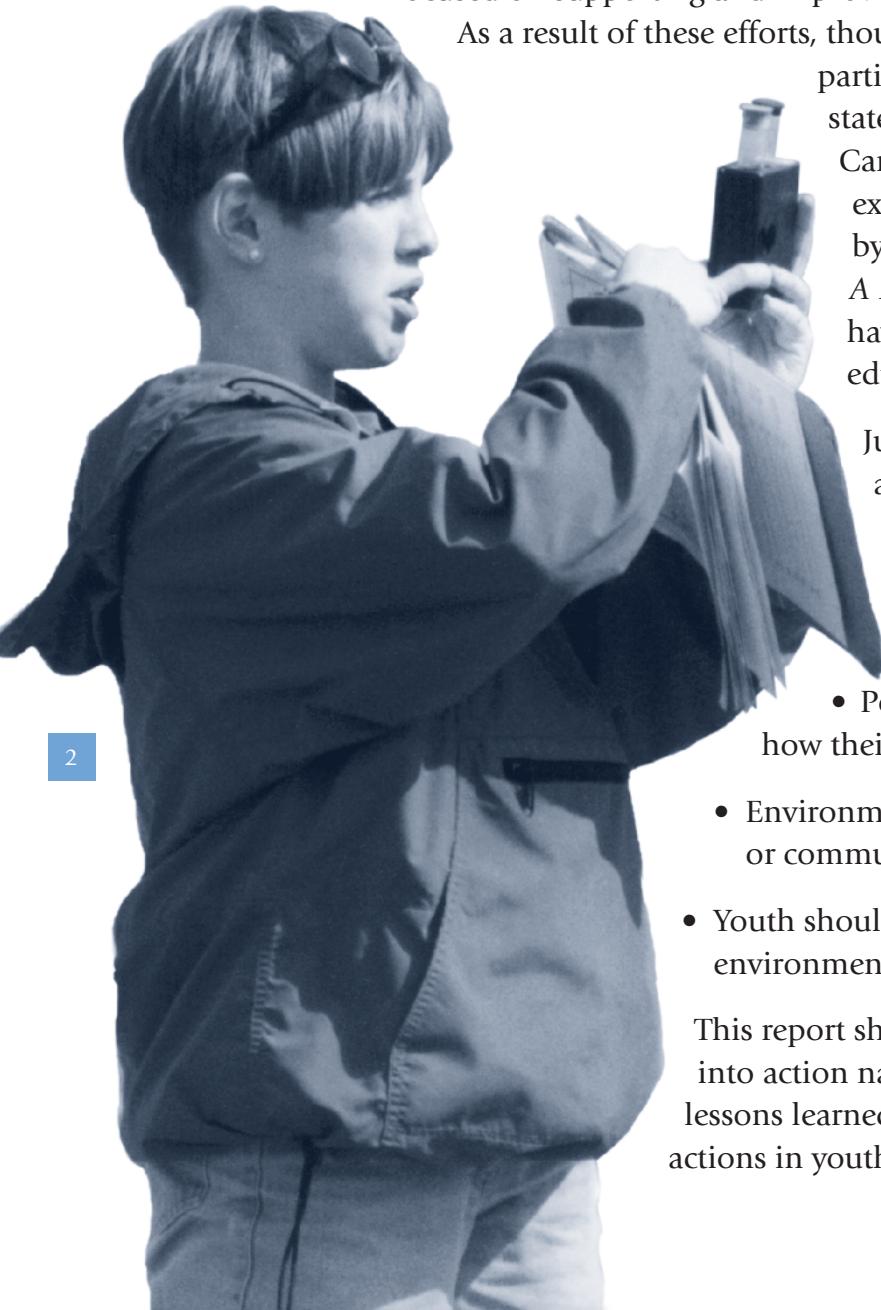
In 1991, Cooperative Extension began a process of identifying how youth water education could respond to critical water quality issues. This initiative was designed to guide federal investment in water curriculum, foster partnerships among national youth water education groups, and improve their access to water education resources.

Over the past seven years, much of the work at the University of Wisconsin has focused on supporting and improving the quality of community-based programs.

As a result of these efforts, thousands of young people and adult leaders have participated in community-based programs in every state. More than 25 partners in the U.S. and Canada have contributed time, money and expertise. Two sets of new materials developed by University of Wisconsin-Extension, *Give Water A Hand* and *Educating Young People About Water*, have greatly increased access to youth water education resources.

Just as important as the programs, partnerships and materials has been the core set of beliefs guiding their development:

- Voluntary actions are a key to maintaining a quality environment;
- People are motivated when they understand how their choices improve their lives and communities;
- Environmental issues are best managed at the watershed or community level;
- Youth should be full and valued partners in local environmental problem-solving.



This report shows how these beliefs have been translated into action nationwide, highlights accomplishments and lessons learned, and points to ongoing needs and future actions in youth water education.

Why involve youth?

- Youth bring enthusiasm, energy and creativity;
- Youth grow as active citizens in the community;
- Youth develop a “sense of place” and learn to take responsibility for their own impact on the environment;
- Youth learn how to apply the process of problem-solving in their lives;
- Youth see how their environmental activities can lead to a career.



STEPS TO INVOLVING YOUTH AS PARTNERS, 1991-1998

Step 1 – Assessing Needs

After collecting more than 1,000 youth water education materials, we sorted the curricula and reviewed them for priority water management topics. Our 1992 report described curricula strengths, provided guidance for federal investments in water curriculum development, and created a network among national groups and agencies promoting youth water education. We continue to review new curricula as they are developed, and update our publications and web page periodically.

STEP 2 – Filling the Gaps

Concern about the lack of youth awareness prompted us to study how to make education more effective. We reviewed research studies, sponsored a national symposium, and informally evaluated approximately 80 successful water education programs. We published our results in *Educating Young People About Water*, a series of program planning resources focused on community-based planning for youth water education. We also created *Give Water A Hand*, a new action guide for youth. These resources help watershed or community teams facilitate youth involvement and select curricula and strategies that fit their needs.

STEP 3 – Supporting Youth Action

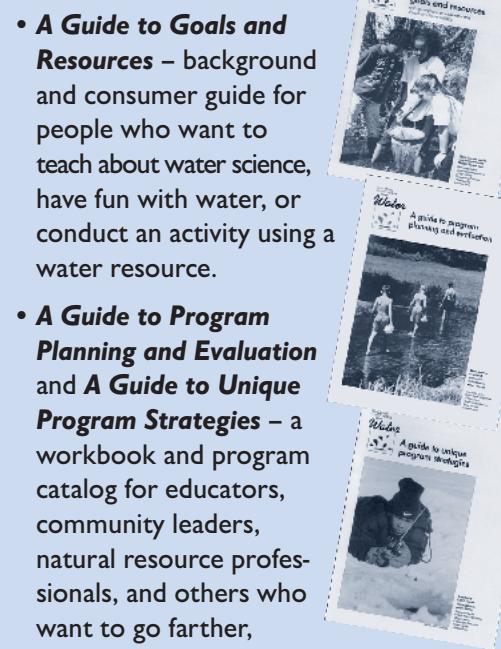
Since 1995, we have worked in cooperation with our partners to provide leader education. Our outreach efforts focus on the need to carefully plan education activities so that youth can help accomplish community water goals. We design training strategies to meet specific needs identified by each of our water education partners.

Resources for youth water education

A resource for leaders...

Educating Young People About Water

resources help leaders guide young people toward understanding the connection between people's actions, community decisions, and environmental quality.



- ***A Guide to Goals and Resources*** – background and consumer guide for people who want to teach about water science, have fun with water, or conduct an activity using a water resource.

- ***A Guide to Program Planning and Evaluation*** and ***A Guide to Unique Program Strategies*** – a workbook and program catalog for educators, community leaders, natural resource professionals, and others who want to go farther, creating a water education program that directly relates information and skills to community water issues and inspires personal action to address community needs.

- ***Planning for Fun and Success*** – an introductory video and workshop guide for leaders or trainers.

A resource for youth...

Give Water A Hand resources help young people take action, focusing on the local watershed.

3



- ***Give Water A Hand Action Guide*** and ***Leader Guide*** – workbooks to help youth identify local water resource needs and create an action project in cooperation with local resource managers.

IMPACTS AND ACCOMPLISHMENTS

To involve youth as partners in water education, our efforts over the past seven years have focused on supporting education leaders, involving youth in communities and building and fostering partnerships. *Educating Young People About Water* resources are designed for leaders. *Give Water A Hand* helps youth take action. The following stories highlight our impacts and accomplishments in using these resources.

EDUCATING YOUNG PEOPLE ABOUT WATER

Educating Young People About Water guide books and video help leaders help young people toward understanding the connection between an individual's actions, community decisions, and environmental quality. A leader may be an educator, natural resource manager, youth leader, or member of watershed group. Whether on their own, in a community team, or in a workshop, leaders learn to:

- Plan and evaluate their programs in relation to a local water issue;
- Choose curricula appropriate to the learners;
- Work in partnership with local experts;
- Improve youth's ability to manage and protect water.

SUPPORTING LEADERS

With increased emphasis on community water issues, leaders need a convenient and comprehensive way to find the best water education resources that meet local needs.

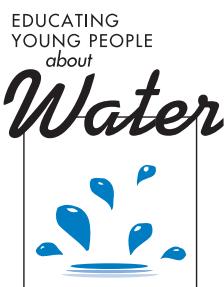
Educators gain access to community water education materials and goals

- More than 20,000 copies of *Educating Young People About Water* materials are used by water education leaders to find and apply appropriate resources and program models.
- Our web page (<http://www.uwex.edu/erc/ywc>) averages 2,000 hits per month. Users can download the guide books and search approximately 120 curricula summaries by topic or grade.
- Approximately 60,000 people have learned about our materials through direct mail, conference displays, newsletters, and our web page. National

distributors (such as Acorn Naturalist and the Water Environment Federation) with a circulation of more than 200,000 list our materials in their catalogs.

Leaders build community teams and integrate water issues into youth programs

- 75 facilitators trained through our workshops provided their own regional training sessions.
- Through more than 50 training opportunities, 2,500 educators and natural resource professionals have the skills to integrate water issues into youth programs, to identify community water education goals, and to facilitate team building for community water education.



BUILDING AND FOSTERING PARTNERSHIPS

Cooperative Extension's seven-year investment in youth water education has been based on collaboration between

PROGRAM SPOTLIGHT

NATIONAL SATELLITE VIDEO CONFERENCE: "Community Water Education for Youth"

Thirty-one sponsors from across the country sponsored the conference, and more than 1,000 education and resource professionals participated in the training. The program featured *Educating Young People About Water – A Guide to Program Planning and Evaluation*, the *Planning for Fun and Success!* video created to explain these materials, and live interaction with five panelists. In evaluating the program, most participants agreed that they learned how to "integrate water issues into youth programs," "identify community water education goals," and "facilitate team building for community water education."

Extension and national agencies and organizations. Community and national partners have been involved in the creation of accurate materials and cost effective dissemination of training and resources.



Educating Young People increases adoption of community-based approaches and a needs assessment strategy

- Our needs assessment and dissemination strategy was adopted by other organizations (the American Fisheries Society, the US Fish and Wildlife Service, and National 4-H Council) in developing their own resource books on fisheries, birds, and energy.
- Several organizations, including Oregon State's 4-H and Oregon University Outreach, have adopted our community-based philosophy of water education planning as the foundation for local training programs.

Partners work together to improve local water quality

- In response to identified curriculum and programming gaps, partners recommended the development of a new resource that would guide youth in identifying community water concerns and conducting water service projects. That resource became *Give Water A Hand*.
- As a result of the University of Wisconsin's expertise, the following organizations requested guidance for developing education goals, strategies and resources for their own programs:
 - Water Environment Federation
 - Groundwater Foundation
 - Blue Thumb
 - Global Rivers Environmental Education Network (GREEN)
 - Trout Unlimited
 - Izaak Walton League
 - United States Geological Survey (USGS)
 - US Fish and Wildlife Service
 - USDA Natural Resources Conservation Service (NRCS)

“We also learned that things we often do without thinking greatly impact our water.”

(5-6 graders, Mobile, AL)

GIVE WATER A HAND

“ My project did make a difference to the people in my watershed as far as their feelings about farmers causing so much of the water quality problems. I helped people become aware that most farmers are doing things to help protect water quality. Many of these things are being done voluntarily. ”

(8th grader, Madison, GA)

How can young people make a difference for the environment in their local communities? How can young people gain environmental stewardship skills? These are the questions we asked when developing *Give Water A Hand* – a watershed education program for youth. Through its *Action Guide* for youth, a *Leader Guide*, and a training manual, this innovative program helps young people protect and improve natural resources in their watersheds. More than 20 Federal agencies and national organizations contributed to program content, and continue to promote and disseminate the program materials.

SUPPORTING LEADERS

Our experience indicates that leaders who practice using *Give Water A Hand* in training sessions are better able to assess youth readiness to take responsibility for projects, feel more comfortable delegating responsibility to youth, and know how to work with community resources.

Partners train leaders in facilitating youth service projects

- In the year we published our training manual (1997) we held 30 workshops, resulting in more than 1,750 adults who have improved their ability to facilitate *Give Water A Hand*. Additional training has been provided by our partners and Extension state contacts.

Youth leaders access *Give Water A Hand* materials and training

Since 1994, at least 100,000 copies of the *Action Guide* have been requested by water educators. In addition, our national partners provide it to employees and clients as needed.

- In 45 states, county and state 4-H faculty can contact an Extension person to access materials and training.
- Five national partners act as distributors: The National Drinking Water Clearinghouse, Global Rivers Environmental Education Network (GREEN), the Water Environment

Federation (WEF), the Conservation Technology Information Center (CTIC), and the University of Wisconsin.

- The *Action Guide*, *Leader Guide*, and Spanish translation can be downloaded from the Give Water A Hand web page (<http://www.uwex.edu/erc/>). This page has been accessed more than 32,000 times to date. Since adding an electronic registration form, over 2,000 educators have downloaded the *Action Guide*.

PROGRAM SPOTLIGHT

ADOPT-A-WATERSHED ADOPTS GIVE WATER A HAND

Adopt-A-Watershed's mission is to inspire students from kindergarten through twelfth-grade with a sense of place in nature and in their community, an awareness that they can make a difference, and a lifelong quest for knowledge about the environment. The *Give Water A Hand* model is an integral part of *Adopt-A-Watershed*, and is used directly when students study water. With the permission of *Give Water A Hand*, we have adapted this fine model and now have *Give Wildlife A Hand* and *Give Soil A Hand* for students to use when studying these subjects.

Kim Stokely, Executive Director, Adopt-A-Watershed, Hayfork, CA

Leaders involve youth in watershed action projects.

- In a 1998 mail survey, participants said *Give Water A Hand* helped them:

Learn new ideas for youth activities (68%);

Teach themselves how to teach youth about watersheds (48%);

Teach themselves how to organize a service learning project (35%);

Guide youth through a watershed service project (26%).



INVOLVING YOUTH IN COMMUNITIES

Investigating water concerns, connecting with local natural resource experts, and solving real community problems are the essence of *Give Water A Hand*.

Give Water A Hand encourages voluntary community involvement

- A phone survey of our national partners indicated that in one year alone (1996-1997) approximately 25,000 youth and 15,000 adult volunteers contributed more than 845,000 volunteer hours on community service projects. This represents more than \$10 million in time donated to managing community water resources.¹

The Action Guide helps youth develop self-esteem

- Middle School teachers in Eau Claire, Wisconsin and Mobile, Alabama used materials primarily to help youth with special needs. Water-education was a secondary goal. *Give Water A Hand* helped these youth develop skills and apply them in solving real-life problems.

BUILDING AND FOSTERING PARTNERSHIPS

Helping diverse Federal agencies and other organizations work together to create the best youth water-education programming is important to Cooperative Extension.

Give Water A Hand provides opportunities for national leaders to work together and involve young people in solving environmental problems.

Partners use Give Water A Hand to encourage voluntary youth involvement

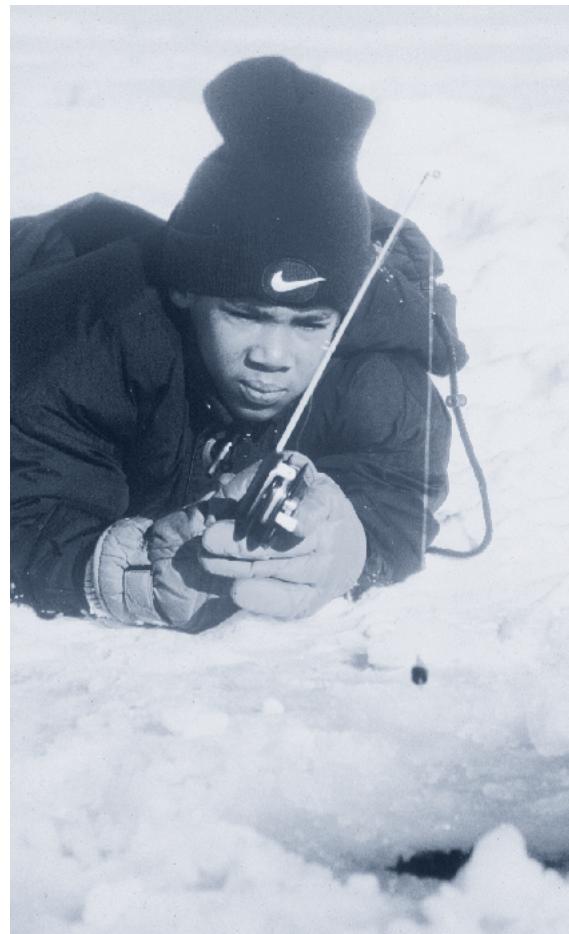
- Beginning with 19 partners in 1994, *Give Water A Hand* now works with 29 national agency and organization partners who actively support or use the *Action Guide*.

Give Water A Hand accelerates adoption of community-based approaches to youth water education

- Several well-known organizations, including the National Wildlife

Federation and Adopt-A-Watershed, have adapted our materials for their own publications.

- The USDA Natural Resources Conservation Service supported development of special guides and networks to encourage use by Earth Team coordinators and volunteers. The NRCS Missouri office endorsed and recommended use of *Give Water A Hand* statewide and distributed 5,000 copies to local offices.
- Several states, including Michigan 4-H and Montgomery County, Maryland, have adapted *Give Water A Hand* for local use.
- The Water Environment Federation promotes *Give Water A Hand* to its state and municipal partners, prompting widespread use by sewage treatment plant educators as part of their community outreach program.



Goals for youth water education

Youth should...

- Understand basic water science and its ecology;
- Be able to collect and analyze information about environmental and socio-economic conditions relevant to local water decisions;
- Be able to evaluate impacts and alternatives for community decisions about water;
- Be able to apply new information in the community;
- Have the opportunity to practice personal water management skills and make a personal commitment to using them.

¹Based on an analysis of estimated materials distribution and use, and on a value of \$12.84 per volunteer hour.



PROJECT PARTNERS

YOUTH WATER CURRICULA NATIONAL REVIEW TEAM

America's Clean Water Foundation
American Water Works Association
Florida Cooperative Extension-Sarasota County
Global Rivers Environmental Education Network (GREEN)
National Aquarium in Baltimore
Ohio State University Cooperative Extension
Southern Illinois University, Touch of Nature Center
University of California Cooperative Extension
University of Nebraska Cooperative Extension
University of Wisconsin Cooperative Extension
Virginia State University Cooperative Extension
Tennessee Valley Authority
USDA, Extension System
USDA, Forest Service
USDA, Natural Resources Conservation Service
US Department of Interior-Fish and Wildlife Service
US EPA, Office of Water
US Geological Survey

GIVE WATER A HAND PARTNERS

American Forests
American Water Works Association
Boy Scouts of America
Church & Dwight Co., Inc.
Council for Environmental Education
Earth Force
Global Rivers Environmental Education Network
The Groundwater Foundation
Izaak Walton League
National 4-H Council
National Aquarium in Baltimore
National Association of Conservation Districts
National Drinking Water Clearinghouse
National Fish and Wildlife Foundation
National Marine Educators Association
National Oceanic and Atmospheric Administration
National Science Teachers Association
Project WET, Water Education for Teachers
Tennessee Valley Authority
Trout Unlimited
United Earth
USDA, Cooperative State Research Extension and Education Service
USDA, Forest Service
USDA, Natural Resources Conservation Service
US EPA, Office of Water
US Department of Interior-Fish and Wildlife Service
US Geological Survey
University of Wisconsin-Cooperative Extension
Water Environment Federation

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EDUCATING
YOUNG PEOPLE
about



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Where do we go from here?

Despite great progress in understanding how to manage our water resources, ground water and surface water are still unsafe for human use in many places. Communities suffer economic losses from reductions in fish populations and sediment-filled harbors. Some fish and shell fish are unsafe to eat. Wildlife habitat continues to be lost.

To better involve our young citizens, we will need a unified voice, a core of motivated educators, and resources designed to help youth investigate problems and devise solutions. We need to develop and support partner collaborations that improve the knowledge and skills of water educators. Cooperative Extension and its water education partners can use their extensive experience and resources to provide needed leadership.

