

Enhancing the Capacity of Extension Volunteer Water Quality Monitoring Efforts

Partnering with Extension for Volunteer Water Quality Monitoring

Linda Green¹,

Elizabeth Herron¹, Kristine Stepenuck²,
Art Gold¹, Kelly Addy¹, and Robin Shepard²



¹ University of Rhode Island

² University of Wisconsin



Alphabet Soup

- **USDA** = US Department of Agriculture
- **CSREES** =
Cooperative State Research, Education, and
Extension Service,
 - "Cooperative Extension"
 - "Extension"

CSREES National WQ Program

*Applying knowledge to improve
water quality*

- 10 regional programs
- Extension Education projects
- Integrated Research, education and and Extension projects
- National Facilitation projects

...all competitively funded

What is Cooperative Extension?

- Extension = community-based educators
- Mission: to bring science to the people, conduct educational outreach, and encourage "better practices"
- Land Grant University System - USDA
 - at least one in every U.S. state & territory
 - Water quality branch
- Many county-based offices



USDA CSREES National Facilitation Grant

Goal: Increase number, capacity, viability, vitality, and connectivity of all Extension-based volunteer monitoring programs & support development of new groups

- **ID existing Extension volunteer monitoring programs & learn about them**
- **Develop & establish & use internet and web-based tools**
- **Develop & distribute training materials**
- **Offer training programs**

Identify & Connect Extension Volunteer Monitoring Programs

- Establish an interactive web-site
www.usawaterquality.org/volunteer/
- electronic list serve- for Extension
<CSREESvolmon-list@uwex.edu>

Multi-media training materials

- “Guide to Growing” Extension Programs
 - Based on case studies of model programs
 - Modular format to ensure timeliness
 - Available in hardcopy and electronic formats
 - Why volunteer water quality monitoring makes sense *
 - Designing your monitoring strategy *
 - Effective training techniques
 - Quality assurance issues
 - Volunteer management and support tools
 - Outreach tools
 - Finding support and funding for local efforts
 - Successful approaches to local data sharing and networking

* www.usawaterquality.org/volunteer

Offer training programs

- Based on "Guide to Growing"
- Conduct training sessions offered through CSREES regional conferences and other venues
 - Pacific Northwest
(July 13-15)
 - Arizona
(June 15-17)





Who, What, why,

This Volunteer Water Quality Monitoring National Facilitation Project is designed to build a comprehensive support system for Extension volunteer water quality monitoring efforts across the country. The goal is to expand and strengthen the capacity of existing Extension volunteer monitoring programs and to assist in the development of new groups.

Volunteer Monitoring National Facilitation Project

- Project Description (382 K pdf file)
- Outreach Materials and Activities
- Nationwide Inquiry
- Online Databases
- Training Sessions and Materials

Extension Volunteer Monitoring Programs

Related Research and Educational Efforts NEW!

Other National Facilitation Projects →

- NEMO
- Best Education Practices
- Pollution Assessment and Prevention



H-m-m-m, looks interesting...

- Monitoring Matrix (80 K pdf file)
- Effective Training (986 K pdf)
- Monitoring Equipment Suppliers (437KB pdf file)
- Direct Links to Monitoring Programs' Manuals (online)
- Quality Assurance
- Volunteer Management
- Outreach Tools
- Locating Support and Funding
- Overcoming Networking Barriers

Special Topics
Highlighted Program NEW!



CSREES Volunteer Water Quality Monitoring National Facilitation Project

Applying knowledge to improve water quality



This Volunteer Water Quality Monitoring support system for Extension volunteer water and strengthen the capacity of existing Ex

Contact information for each Extension Volunteer Monitoring Program in the U.S. and its territories

comprehensive the goal is to expand development of

Volunteer Monitoring National Facilitation Project

Project Description (382 K pdf file)

Outreach Materials and Activities

Nationwide Inquiry

Online Databases

Training Sessions and Materials

Extension Volunteer Monitoring Programs

Related Research and Educational Efforts **NEW!**

Other National 



Following Programs

... (803 K pdf file)

Why monitoring Makes Sense (582K pdf file)

Designing Your Monitoring Strategy (1.6 M pdf file)

Monitoring Matrix (80 K pdf file)

Effective Training (986 K pdf)

Monitoring Equipment Suppliers (437KB pdf file)

Direct Links to Monitoring Programs' Manuals (online)

Quality Assurance

Volunteer Management

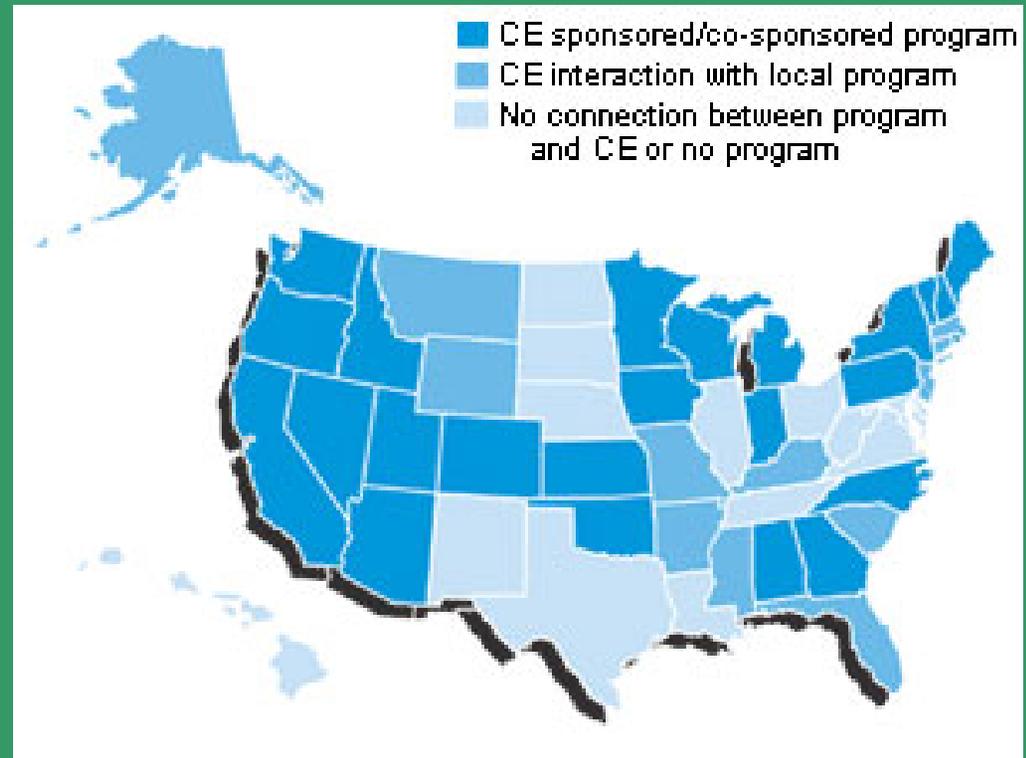
Outreach Tools

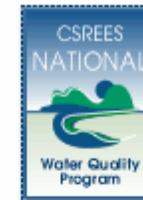
Locating Support and Funding

Overcoming Networking Barriers

Current Extension Programs

- Total of 38 programs associated with Extension
- Began as early as 1978 and as recently as 2003
- Monitor variety of habitats, including rivers, streams, lakes, ponds, wells, wetlands, & estuaries





This Volunteer Water Quality Monitoring support system for Extension volunteer and strengthen the capacity of existing

comprehensive goal is to expand development of

Results of Inquiry to Current Extension Programs on:

- Program Beginnings
- Training Techniques
- QA Measures
- Volunteer Support Tools
- Outreach Tools
- Program Funding

Initiatives

Project Description (382 K pdf file)

Outreach Materials and Activities

Nationwide Inquiry NEW!

Data Reporting

Extension Volunteer Monitoring Programs

Related Research and Educational Efforts

National Facilitation Projects

NEMO

Best Education Practices

Pollution Assessment and Prevention

Programs

(K pdf file)

(f file)

NEW!

(1.6 M pdf file)

ment

nd Funding

rking Barriers

m

m Archives

National Water Monitoring Day

Upcoming Events

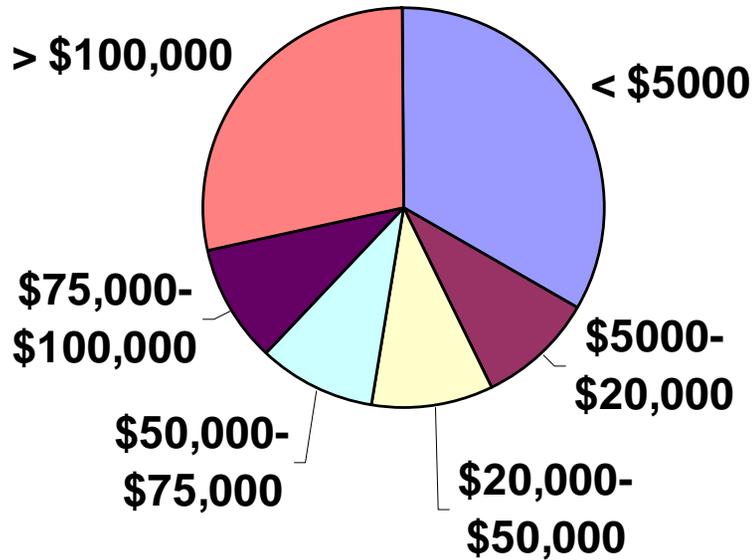
Galaxy II - National Extension Conf.

Select Inquiry Results - Outreach Tools

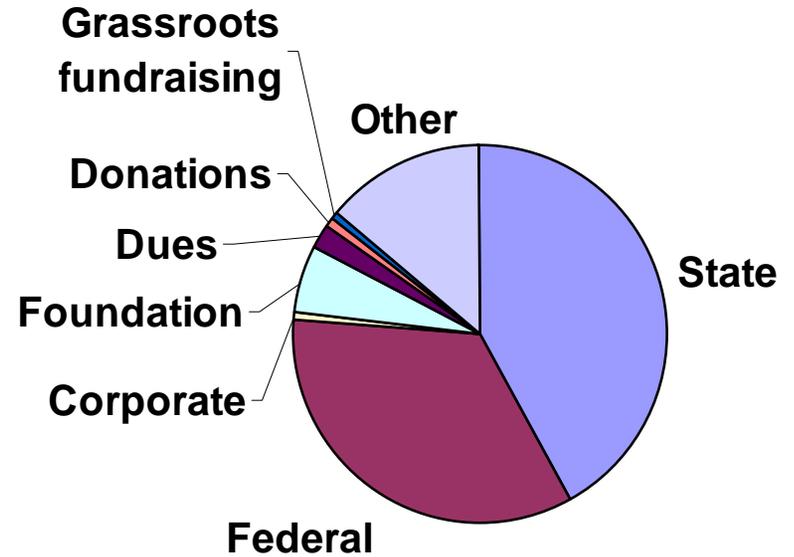
Table 1: Written sampling protocols/methodology availability.

State	Program	Methods developed	Available for purchase	Available for free	Available on website*
AL	Alabama Water Watch	✓	✓	✓	Some
CO	North Fork Volunteer Monitoring Project	✓		✓	
IN	Hoosier Riverwatch	✓	✓	✓	✓
IA	IOWATER	✓		✓	
KS	Private well monitoring				
ME	Maine Shore Stewards	✓	✓	✓	
MI	Lake Superior Lake Watch	✓		✓	
MN	Volunteer Stream Monitoring Partnership	✓		✓	
MN	St. Louis River- River Watch				
NV, CA	Tahoe-Truckee Snapshot				
NH	NH Lake Lay Monitoring Program	✓		✓	
NH	Great Bay Coast Watch	✓	✓		
NY	Community Fly Fisher	✓		✓	
NC	Watershed Watch				
OK	Illinois Basin/Spring Creek Blue Thumb	✓		✓	
RI	URI Watershed Watch	✓	✓	✓	✓
WA	WSU Beach Watchers	✓		✓	
WA, ID, OR	Pacific Northwest Water Quality Monitoring Program	✓		✓	
WI	Adopt-a-Lake	✓	✓	✓	
WI	Water Action Volunteers	✓	✓**	✓	✓
VT	Watershed Alliance	✓		✓	

Select Inquiry Results - Funding



Extension program
annual budgets in 2001



Extension program
Funding sources in 2001



This Volunteer Water Quality Monitoring National Facilitation Project is designed to build a comprehensive support system for Extension volunteer water quality monitoring efforts across the country. The goal is to expand and strengthen the capacity of existing Extension volunteer monitoring programs and support development of new groups.

Volunteer Monitoring National Facilitation Project

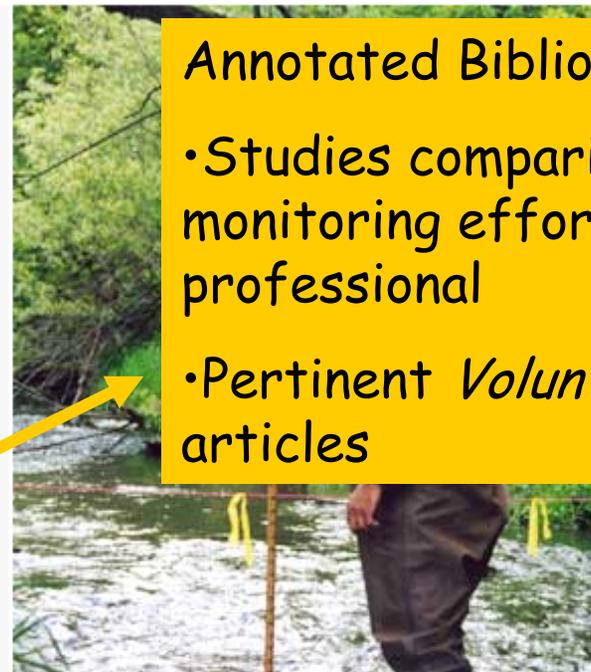
- Project Description (382 K pdf file)
- Outreach Materials and Activities
- Nationwide Inquiry
- Online Databases
- Training Sessions and Materials

Extension Volunteer Monitoring Programs

Related Research and Educational Efforts **NEW!**

Other National Facilitation Projects →

NEMO



Annotated Bibliography:

- Studies comparing volunteer monitoring efforts to those professional
- Pertinent *Volunteer Monitor* articles

Locating Support and Funding Overcoming Networking Barriers

Special Topics



This Volunteer Water Quality Monitoring National Facilitation Project is designed to build a comprehensive support system for Extension volunteer water quality monitoring efforts across the country. The goal is to expand and strengthen the capacity of existing Extension volunteer monitoring programs and support development of new groups.

Volunteer Monitoring National Facilitation Project

- Project Description (382 K pdf file)
- Outreach Materials and Activities
- Nationwide Inquiry
- Online Databases**
- Training Sessions and Materials

Extension Volunteer Monitoring Programs

Related Research and Educational Efforts NEW!

Other National Facilitation Projects →

NEMO

Online Database:

- Info on online database developed & tested at University of Wisconsin
- Info on what to think about before setting up a database
- Links to programs with on-line databases

Special Topics

Water Action Volunteers

Citizen Monitoring DATABASE



[Previous Page](#)

[About the Data](#)

[WAV Home](#)

Welcome to the Water Action Volunteers' Citizen Stream Monitoring database!

This database is your connection to data that have been collected by citizen monitors throughout the state of Wisconsin on our streams and wadable rivers.

Enter the Database

About the Data

Learn more specific information (the who, what, where, why and when) about the data

Monitoring Results **NEW!**

View results that have been summarized for various streams where Water Action Volunteers have monitored. Results are presented as brochures that are available for viewing and printing as pdf files.

Printable directions for searching the database (130K pdf')

Local Coordinators' registration and data entry procedures guide (345K pdf')

Citizen stream monitors are people just like you! If you have an interest in learning about the quality of the water in your local stream or river, then you might be interested in becoming a citizen stream monitor. Contact Kris Stepenuck, Water Action Volunteers' Program Coordinator at 608-264-8948 or kris.stepenuck@ces.uwex.edu for more information.

*Portable Document Format files (.pdf) can be viewed, navigated and printed from a workstation using the freely available Acrobat Reader software from Adobe Systems Inc. Versions of Acrobat Reader run on DOS, Windows, Macintosh and Unix systems. Most up-to-date browsers already include Acrobat Reader. [Click here for more information or to download Acrobat Reader.](#)

[Previous Page](#) | [Back to WAV Monitoring Home](#)

 University of Wisconsin-Extension Water Resources Programs
<http://clean-water.uwex.edu>

 Wisconsin Department of Natural Resources Nonpoint Source Water Pollution Abatement Program
<http://www.dnr.state.wi.us/org/water/wm/np/index.htm>

Photo credits for WAV Web site: Robert Queen, Jeff Strobel, Pam Packer, Suzanne Wade, Vickie Mayer, Peggy Compton, Kris Stepenuck and WAV Program Volunteers.



This Volunteer Water Quality Monitoring National Facilitation Project is designed to build a comprehensive support system for Extension volunteer water quality monitoring programs and strengthen the capacity of existing Extension water quality monitoring programs. The goal is to expand the development of

All outreach materials to date, Including fact sheets, posters, and ppt presentations

Volunteer Monitoring National Facilitation Project

Project Description

Outreach Materials and Activities

Nationwide Inquiry

Online Databases

Training Sessions and Materials

Extension Volunteer Monitoring Programs

Related Research and Educational Efforts NEW!

Other National Facilitation Projects →

NEMO



Programs

pdf file)

)

3 M pdf file)

pdf file)

Effective Training (985 K pdf)

Monitoring

Equipment Suppliers (437KB pdf file)

Direct Links to Monitoring Programs' Manuals (online)

Quality Assurance

Volunteer Management

Outreach Tools

Locating Support and Funding

Overcoming Networking Barriers

Special Topics

NEW!



Guide for Growing Programs:
...pdf files of Guide modules ranging from designing your monitoring strategy when in program formation stages to volunteer management and funding for established programs

...ation Project is designed to build a comprehensive monitoring efforts across the country. The goal is to expand water monitoring programs and support development of

Guide for Growing Programs

- Using the Guide (803 K pdf file)
- Why Monitoring Makes Sense (582K pdf file)
- Designing Your Monitoring Strategy (1.6 M pdf file)
- Monitoring Matrix (80 K pdf file)
- Effective Training (986 K pdf)
- Monitoring Equipment Suppliers (437KB pdf file)
- Direct Links to Monitoring Programs' Manuals (online)
- Quality Assurance
- Volunteer Management
- Outreach Tools
- Locating Support and Funding
- Overcoming Networking Barriers



Related Research and Educational Efforts **NEW!**

Other National Facilitation Projects →

NEMO

Special Topics



December 2002
Factsheet II



Why Volunteer Water Quality Monitoring Makes Sense

University of Rhode Island

University of Wisconsin

Engages Citizens in Watershed Protection and Enhancement

Assessments of existing volunteer monitoring efforts within CSREES¹ suggest that volunteer water quality monitoring programs provide a unique opportunity to engage citizens in watershed protection and enhancement efforts. These programs have a unique capacity to:

- Address CSREES themes
- Help communities make informed decisions and improve water quality
- Capture the excitement and

Kelly Addy, Linda Green, Elizabeth Herron, and Kris Stepenuck

Addresses CSREES Themes

The Cooperative State Research, Education, and Extension Service (CSREES) Water Quality Program, with help from Cooperative Extension (CE) programs of each state and territory, identified eight topical themes for research, education and extension. These themes are: Animal Waste Management, Drinking Water and Human Health, Environmental Restoration, Nutrient and Pesticide Management, Pollution Assessment and Prevention, Watershed Management, Water Conservation and Agricultural Water Management, and Water Policy and Economics. Volunteer water quality monitoring can effectively address each of these themes. Volunteers learn the background to these water quality issues, gather valuable water quality data, and share information with the



January 2004
Factsheet V



Training Volunteer Water Quality Monitors Effectively

University of Rhode Island University of Wisconsin

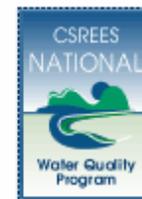
Elizabeth Herron, Linda Green, Kris Stepenuck, and Kelly Addy

Effective training of volunteer water quality monitors is critical for volunteer competency and satisfaction, and therefore essential for program success. This factsheet reviews some basic elements of successful training and provides some tips for improving your training strategy. Links to websites with more in-depth information are included throughout this document. We suggest that you also review the materials and links to Extension-associated volunteer water quality monitoring programs found at our website (<http://www.usawaterquality.org/volunteer>) for additional resources.

Training Is a Process that Flows Throughout the Program

Typically, we think of training as that time spent in a classroom or out in the field demonstrating particular methods to new volunteers. However, in order





This Volunteer Water Quality Monitoring National Facilitation Project is designed to build a comprehensive support system for Extension volunteer water quality monitoring efforts across the country. The goal is to expand and strengthen the capacity of existing Extension volunteer monitoring programs and support development of new groups.

Highlighted Extension Monitoring Programs

- Rotated regularly (archive maintained)
- Emphasizes program outcomes and accomplishments
- Learn more about successful programs



Guide for Growing Programs

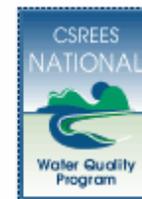
- Using the Guide (803 K pdf file)
- Why Monitoring Makes Sense (582K pdf file)
- Designing Your Monitoring Strategy (1.6 M pdf file) **NEW!**
- Effective Training
- Quality Assurance
- Volunteer Management
- Outreach Tools
- Locating Support and Funding
- Overcoming Networking Barriers

Special Topics

- Highlighted Program
- Highlighted Program Archives
- Subjectings
- National Water Monitoring Day

Upcoming Events

- Galaxy II - National Extension Conf. with special water quality sessions



This Volunteer Water Quality Monitoring National Facilitation Project is designed to build a comprehensive support system for Extension volunteer water quality monitoring efforts across the country. The goal is to expand and strengthen the capacity of existing Extension volunteer monitoring programs and support development of new groups.

Initiatives

- Project Description (382 K pdf file)
- Outreach Materials and Activities **NEW!**
- Nationwide Inquiry
- Data Reporting

Extension Volunteer Monitoring Programs

Related Research and Educational Efforts

National Facilitation Projects

- NEMO
- Best Education Practices
- Pollution Assessment and Prevention



Guide for Growing Programs

- Using the Guide (803 K pdf file)
- Why Monitoring Makes Sense (582K pdf file)
- Designing Your Monitoring Strategy (1.6 M pdf file) **NEW!**

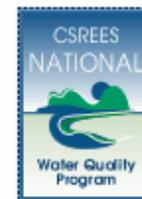
- Effective Training
- Quality Assurance
- Volunteer Management
- Outreach Tools
- Locating Support and Funding
- Overcoming Networking Barriers

Special Topics

- Highlighted Program
- Highlighted Program Archives
- Job postings
- National Water Monitoring Day

Upcoming Events

- Galaxy II - National Extension Conf. with special water quality sessions



This Volunteer Water Quality Monitoring National Facilitation Project is designed to build a comprehensive support system for Extension volunteer water quality monitoring efforts across the country. The goal is to expand and strengthen the capacity of existing Extension volunteer monitoring programs and support development of new groups.

Initiatives

- Project Description (382 K pdf file)
- Outreach Materials and Activities **NEW!**
- Nationwide Inquiry
- Data Reporting

Extension Volunteer Monitoring Programs

Related Research and Educational Efforts

National Facilitation Projects

- NEMO
- Best Education Practices
- Pollution Assessment and Prevention



Guide for Growing Programs

- Using the Guide (803 K pdf file)
- Why Monitoring Makes Sense (582K pdf file)
- Designing Your Monitoring Strategy (1.6 M pdf file) **NEW!**
- Effective Training
- Quality Assurance
- Volunteer Management
- Outreach Tools
- Locating Support and Funding
- Overcoming Networking Barriers

Special Topics

- Highlighted Program
- Highlighted Program Archives
- Job postings
- National Water Monitoring Day

Upcoming Events

- Galaxy II - National Extension Conf. with special water quality sessions



This Volunteer Water Quality Monitoring National Facilitation Project is designed to build a comprehensive support system for Extension volunteer water quality monitoring programs across the country. The goal is to expand and strengthen the capacity of existing Extension water quality monitoring programs and support development of new programs.

Link back to the
 USDA CSREES
 National Water
 Quality Program
 web site

Initiatives

- Project Description (382 K pdf file)
- Outreach Materials and Activities
- Nationwide Inquiry **NEW!**
- Data Reporting

Extension Volunteer Monitoring Programs

Related Research and Educational Efforts

National Facilitation Projects

- NEMO
- Best Education Practices
- Pollution Assessment and Prevention



Guide for Growing Programs

- Using the Guide (803 K pdf file)
- Why Monitoring Makes Sense (582K pdf file)
- Designing Your Monitoring Strategy (1.6 M pdf file) **NEW!**

- Effective Training
- Quality Assurance
- Volunteer Management
- Outreach Tools
- Locating Support and Funding
- Overcoming Networking Barriers

Special Topics

- Highlighted Program
- Highlighted Program Archives
- Job postings
- National Water Monitoring Day

Upcoming Events

- Galaxy II - National Extension Conf. with special water quality sessions



CSREES

National Water Quality Program

Applying knowledge to improve water quality



— [Research, Education & Extension](#) —

[Contacts](#) • [Event Calendar](#) • [Feedback](#) • [Reporting](#) • [Site Map](#)

[About this Program](#)

[Regional Programs](#)

[National Themes](#)

[National Facilitation](#)

[Extension Education](#)

[Integrated Research,
Education, and
Extension](#)

[Funded Projects](#)

[Success Stories](#)

[Online Resources](#)

[Home](#)

[Previous Page](#)

search this website:



January 11 - 15, 2004
[USDA-CSREES National Water Quality Conference:](#)
 Integrating Research, Extension and Education
 Clearwater, Florida



Upcoming Events

[October 19 - 23:](#)
 Southern Region
 Extension Water Quality
 Conference
 Venue: Ruidoso, NM

[November 2 - 4:](#)
 Water Environment
 Federation; Animal
 Residuals Conference
 Venue: Arlington, VA

[November 4 - 8:](#)
 North American Lake
 Management Society
 (NALMS) Annual
 Conference
 Venue: Mashantucket,
 CT

[January 11 - 15:](#)
 USDA-CSREES
 National Water Quality
 Conference: Integrating
 Research, Extension
 and Education
 Venue: Clearwater, FL

[more events are listed in
the event calendar...](#)

[Proceedings of the
2003 National Water
Quality Coordinators'
Conference](#)

By linking with Extension, volunteer water quality monitoring programs bring university science to the community and community realities to the university

Thank you!