

# How to Use the Guide to Growing CSREES Volunteer Monitoring Programs

University of Rhode Island                      University of Wisconsin

## Why this Guide was Created

Volunteer monitoring can be a tremendous asset to water quality protection efforts<sup>1</sup>. While volunteers contribute their monitoring effort for 'free', these cost-effective monitoring programs require a great deal of effort and usually some expense to operate. In addition, for a program to work well a significant amount of planning, implementation and ongoing management must occur. Fortunately there are a variety of resources available to assist in developing new programs or expanding existing programs.

The Cooperative State Research Education Extension Service (CSREES) Volunteer Water Quality Monitoring National Facilitation Project is developing this guide to direct you to some of those resources and help you start asking questions that you'll need to answer in order to create an effective program that meets the needs of your community.

Input from CSREES State Water Quality Coordinators and CSREES-associated volunteer water quality monitoring program coordinators was a critical element of the development of the **Guide to Growing CSREES Volunteer Monitoring Programs**. Most of the modules reflect their responses to a set of inquiries conducted to assess the current status of volunteer monitoring within CSREES<sup>1</sup>. This Guide represents the diversity of experiences and expertise found within CSREES that can and will support the expansion of volunteer monitoring efforts.

*Elizabeth Herron, Kris Stepenuck, and Kelly Addy*

## Structure and Contents of the Guide

The **Guide to Growing CSREES Volunteer Monitoring Programs** has been designed in a modular form, with a series of 'chapters' or modules that can be used alone or in conjunction with other sections depending upon the needs of your program. The purpose of this guide is bring together some of the excellent resources produced by a wide variety of monitoring programs or agencies into a comprehensive document to help support CSREES-affiliated volunteer monitoring efforts. Thus you will find frequent references and links to a wide variety of materials from Cooperative Extension and other programs.

The modular structure was selected not only to facilitate the use of selected materials, but to also allow for easy updates. We are anxious to receive feedback, suggestions and especially leads on additional material or topics that should be included in this guide. Our goal is to highlight the excellent work of our volunteer monitoring colleagues, both those within and outside of the CSREES to help develop a strong national support system for volunteer monitoring within CSREES.



<sup>1</sup> The impact of volunteer water quality monitoring was assessed in two USDA CSREES projects. The first project, *Assessing the Scope of Cooperative Extension Volunteer Water Quality Monitoring Programs*, took place during 1995-96 and encompassed written and/or oral interviews with CE State Water Quality Coordinators and individual CE-sponsored program coordinators. The second project, *National Facilitation of Cooperative State Research Education Extension Service Volunteer Monitoring Efforts* included written inquiries and follow-up email correspondence during 2001-02 to CE State Water Quality Coordinators and individual CE-sponsored program coordinators.

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Many of the modules to be included in the Guide are currently under development. We are actively soliciting input to those, as well as accepting comments to modules already completed. Additional modules will be added as needed, and your suggestions are welcome.



### Guide Modules:

- Why volunteer water quality monitoring makes sense** (<http://www.usawaterquality.org/volunteer/Outreach/whymakesense.pdf>). This section focuses on the many benefits of volunteer monitoring to both local communities and to support organizations such as Cooperative Extension. It features the experiences of active CSREES-based monitoring program coordinators to highlight the myriad of ways that volunteer monitoring engages citizens in active watershed protection and enhancement efforts.
- Designing your monitoring strategy: Basic questions and resources to help guide you.** (<http://www.usawaterquality.org/volunteer/Outreach/designingyourstrategy.pdf>). Focusing on the continuum of monitoring activities, this section is designed to help new program coordinators start designing their monitoring strategy. It does not contain a comprehensive list of monitoring methods, but rather information needed to help choose which monitoring methods are most appropriate for meeting your specific monitoring objectives with available resources. There are links to a variety of monitoring procedures manuals and quality assurance project plans.
- Training Volunteer Water Quality Monitors Effectively.** (<http://www.usawaterquality.org/volunteer/Outreach/EffectiveTraining.pdf>) This section provides an overview of the basics of training and suggestions for tailoring training methods to meet your needs. It also provides extensive information for developing safe and effective classroom and field training sessions, as well as numerous links for additional information on learning styles and other educational issues.
- Quality assurance issues (under development).** Quality assurance is a critical issue with all monitoring programs, including volunteer programs. This section will provide information to help focus on meeting your own program's objectives and associated QA standards– not necessarily on having your program follow the most stringent methods.
- Volunteer management and support tools (under development).** This section will emphasize the need for comprehensive program coordination – volunteer monitoring programs are much more than simply training a few folks to collect water samples. They take real work and effort to be successful. Tools and techniques used with success by CSREES monitoring programs will be the focus of this section.
- Outreach tools (under development).** How you get your target audience involved, and once you have data, how you present that information are the topics to be addressed in this section. Tools and techniques used with success by CSREES monitoring programs will be highlighted in this section.
- Finding support and funding for local efforts (under development).** Effective ecological monitoring is a long-term commitment, which often requires support from a variety of sources to ensure financial stability. Building strong partnerships can help create that stability and often enhances credibility as well as provides access to additional resources and expertise. This section will explore ways to develop those linkages, as well as suggest opportunities for strengthening connections within CSREES and to other agencies.
- Successful approaches for overcoming barriers to local data sharing and networking (under development).** This section will discuss regional and statewide monitoring councils as potential tools for facilitating data sharing and networking. In addition it will highlight how various programs have either used their own data or gotten others to work with their data to effect some sort of change, such as the voluntary adoption of best management practices or ordinances that protect water quality.

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## Resources to Get You Started

Each section of the **Guide to Growing CSREES Volunteer Monitoring Programs** will contain numerous links to available resources. Listed here are a number of manuals that provide a framework for developing programs that should be part a monitoring coordinator's basic library.

### **Volunteer monitoring resources available from United States Environmental Protection Agency (USEPA):**

- Starting Out in Volunteer Water Monitoring, Factsheet <http://www.epa.gov/owow/monitoring/volunteer/startmon.html> (available in PDF 837 KB)
  - Volunteer Water Monitoring: A Guide for State Managers. EPA 440-4-090-010, August 1990.
  - Volunteer Lake Monitoring: A Methods Manual. EPA 440/4-91-002, December 1991. <http://www.epa.gov/owow/monitoring/lakevm.html> (available in PDF, 868 Kb)
  - Volunteer Estuary Monitoring: A Methods Manual. EPA 842-B-93-004, December 1993. <http://www.epa.gov/owow/estuaries/monitor/> (available in PDF)
  - Volunteer Monitor's Guide to Quality Assurance Project Plans. EPA 841-B-96-003, September 1996. <http://www.epa.gov/owow/monitoring/volunteer/qappcovr.htm> (available in PDF, 147 Kb).
  - Volunteer Stream Monitoring: A Methods Manual. EPA 841-B-97-003, November 1997. <http://www.epa.gov/owow/monitoring/volunteer/stream/> (available in PDF 4 Mb)
  - Volunteer Wetland Monitoring: An Introduction and Resource Guide. EPA 843-B-00-001, December 2001. <http://www.epa.gov/owow/wetlands/monitor/volmonitor.html> (available in PDF 1.5Mb and 256 Kb versions).
- The Volunteer Monitor*, published twice yearly, is the national newsletter of volunteer water monitoring. The newsletter facilitates the exchange of ideas, monitoring methods, and practical advice among volunteer monitoring groups across the country. Subscriptions are free, and issues since 1993 are available on-line as PDFs at <http://www.epa.gov/owow/monitoring/volunteer/issues.htm>

### **Regional and state programs guides:**

- Environmental Stewardship in the Gulf of Maine: A Coordinator's Manual for Volunteer Monitoring* (2002) Available for \$20 through the University of Maine Cooperative Extension. To order contact the UMCE website <http://www.umext.maine.edu/publications/coastal.htm> or by mail at UMCE Communications Office, 5741 Libby Hall, Room 110, Orono, ME 04469-5741. Phone: 1-800-287-0274 (in Maine) or (207) 581-3269.
- Field Manual for Global Low-Coast Water Quality Monitoring*, 12<sup>th</sup> edition (2000) Stapp, William B., Mitchell, Mark K. To obtain a copy contact: Kendall/Hunt Publishing Company, 4050 Westmark Drive, PO Box 1840, Dubuque, Iowa 52004-1840. 1-800-228-0810.
- Massachusetts Water Watch Partnership Lake Volunteer Water Quality Manual*. (2003) Available in PDF at: <http://www.umass.edu/tei/mwwp/acrobat/lake%20manual.pdf>
- Pennsylvania Citizens' Volunteer Monitoring Program *Designing Your Monitoring Program: A Technical Handbook for Community-Based Monitoring In Pennsylvania*. (2001) Dates, Geoff. River Network. Available in PDF at: [http://www.dep.state.pa.us/dep/deputate/watermgmt/WC/subjects/CVMP/cvmp\\_HdBook.htm](http://www.dep.state.pa.us/dep/deputate/watermgmt/WC/subjects/CVMP/cvmp_HdBook.htm)
- Program Organizing Guide* (1995) and *River Monitoring Study Design Workbook* (1995). Available for \$10 each through the River Network: <http://www.rivernetwork.org/marketplace/category.cfm?Category=6>
- Riparian and Aquatic Ecosystem Monitoring: A Manual of Field and Lab Procedures*, 4th edition (2003). Available for \$30 + shipping and handling through Student Watershed Research Project: [http://www.swrp.org/Publications/Manual/manual\\_main.htm](http://www.swrp.org/Publications/Manual/manual_main.htm).
- VEMN Guide to Volunteer Watershed Monitoring Options in the Merrimack River Watershed* (1996). Available in PDF at: <http://www.umass.edu/tei/mwwp/librarybytopic.html#ecology>, select VEMN under the 'By Source' section at the top of the page for access to the PDF files.

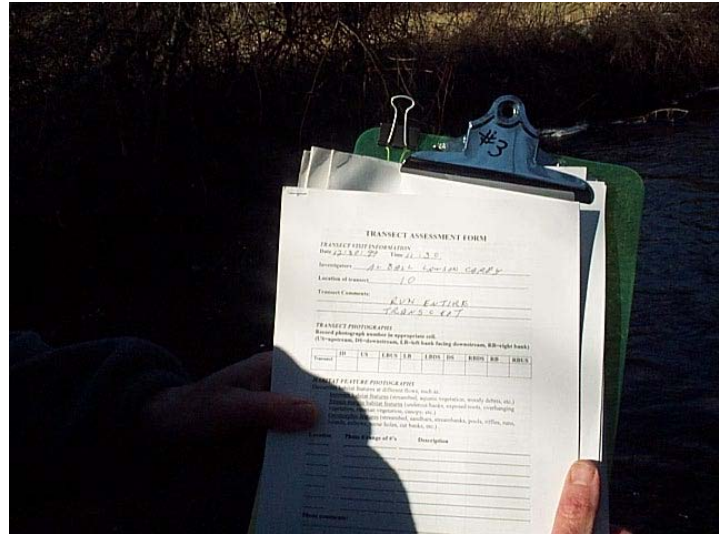
**A search of the World Wide Web will result in many more similar references; but these will get you started!**

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### Next Steps

Our hope is that you will use this guide as a jumping off point for your own program development. Except where noted, the materials are available for reprinting and modification to meet your program needs. We do ask that you credit the original source or this guide as appropriate.

Facilitation project staff are also happy to assist you in identifying opportunities or to help you locate information. Our contact information is included at the end of each section, and we encourage the use of E-mail for initial contact.



We also suggest that you consider joining the CSREES Volunteer Monitoring list serve. This purpose of this list serve is to encourage networking among the various CSREES associated monitoring programs to promote sharing of experiences and materials, and to strengthen all of our programs. This moderated list is open to individuals with an interest in, or affiliation with Extension-associated volunteer water quality monitoring programs. Messages are only allowed to be posted to the list by subscribers and replies are sent to the sender of the message only.

**To join the CSREES Volunteer Monitoring list serve send an email to Kris Stepenuck with your request to do so (kris.stepenuck@ces.uwex.edu). She will reply shortly with additional information.**



### Summary

Developing a Cooperative Extension volunteer water quality monitoring program is an effective means of reaching diverse audiences and raising awareness of water resource issues. The Volunteer Water Quality Monitoring National Facilitation Project is working with CSREES-associated volunteer monitoring programs to develop additional resources to assist in program development, and to serve as valuable models.

You are welcome to reproduce or borrow any portions of this document, but please contact us to let us know you are doing so. Please visit our website or contact us for more information on growing volunteer water quality monitoring programs: <http://www.usawaterquality.org/volunteer/>

### CONTACTS

**Linda Green, 401-874-2905, lgreen@uri.edu**  
**Arthur Gold, 401-874-2903, agold@uri.edu**  
**Elizabeth Herron, 401-874-4552, emh@uri.edu**  
**Kelly Addy, 401-874-7532, kaddy@uri.edu**  
**University of Rhode Island**  
**Cooperative Extension**  
**Coastal Institute in Kingston, Rm 105**  
**1 Greenhouse Road**  
**Kingston, RI 02881**

**Robin Shepard, 608-262-1843**  
**rlshepar@wisc.edu**  
**Kris Stepenuck, 608-265-3887**  
**kris.stepenuck@ces.uwex.edu**  
**University of Wisconsin-Extension**  
**210 Hiram Smith Hall, 1545**  
**Observatory Drive**  
**Madison, WI 53706-1289**

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