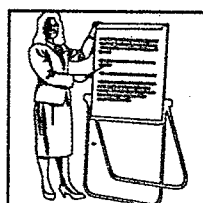
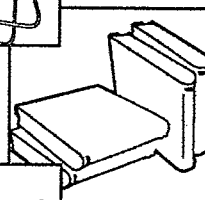




# Watershed Training Opportunities



*Training Courses*



*Training Materials*



*Facilitation*



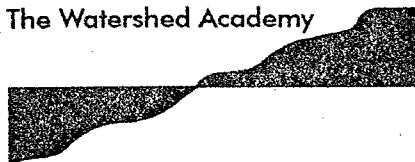
*Internet Training*

The Watershed Academy

• Information Transfer Series



The Watershed Academy



• Information Transfer Series, No. 12 •

# Watershed Training Opportunities



Assessment and Watershed Protection Division  
Office of Wetlands, Oceans and Watersheds  
U.S. Environmental Protection Agency (4503F)  
401 M Street, SW  
Washington, DC 20460



## ***Acknowledgments***

This booklet was prepared for the U.S. Environmental Protection Agency's (EPA's) Office of Water under EPA Contract 68-C7-0018, under the direction of Anne Weinberg, Doug Norton, and Joan Warren in the Office of Wetlands, Oceans and Watersheds.

The project managers express appreciation to the many EPA staff, most particularly those in the Office of Science and Technology, the Office of Wastewater Management, the Office of Ground Water and Drinking Water, and the Office of Wetlands, Oceans and Watersheds, as well as others who contributed information about their watershed-related training activities and participated in document review.

### **This booklet should be cited as:**

U.S. Environmental Protection Agency. 1998. *Watershed Training Opportunities*. EPA 841-B-98-001. Office of Water (4503F), United States Environmental Protection Agency, Washington, DC. 28 pp.

## ***Notice***

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### **To obtain a copy of this and other Watershed Academy documents free of charge, contact:**

National Center for Environmental Publications and Information (NCEPI)  
Phone: (513) 489-8190, (800) 490-9198  
Fax: (513) 489-8695

This booklet is available on the Internet at:

**<<http://www.epa.gov/owow/watershed/wacademy/its.html>>**



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## ***Introduction***

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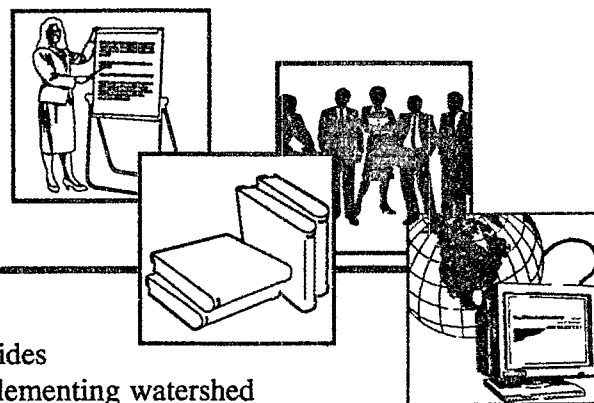
The U.S. Environmental Protection Agency's (EPA's) Watershed Academy is a focal point in the Office of Water for providing training and information on implementing watershed approaches to a variety of audiences. These audiences include federal, state, tribal, and local officials, as well as private practitioners of watershed management. The Watershed Academy sponsors its own training courses and develops training materials; it also publicizes watershed-related training materials developed by others.

This booklet describes the watershed training opportunities sponsored by EPA's Office of Water and the Watershed Academy. It includes descriptions of the four main activities of the Watershed Academy—training courses, publications, watershed management facilitation services to help states and tribes implement watershed approaches, and website—and also covers training courses and educational materials on watersheds produced throughout the EPA Office of Water.

This booklet is a resource guide to the watershed training courses and educational materials generally available through the Watershed Academy and the EPA Office of Water. The blue insert lists currently scheduled courses and will be updated as needed. To obtain the latest schedule and training information, go to the Watershed Academy website at **<<http://www.epa.gov.owow/watershed/wacademy.htm>>**.

# What Is the Watershed Academy?

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EPA's Watershed Academy provides training and information on implementing watershed approaches\* to local, state, tribal, and federal officials and private practitioners of watershed management. The Watershed Academy sponsors its own training courses and develops training materials; it also publicizes watershed-related training materials developed by others.

The Watershed Academy consists of four key components:

**Training Courses** on topics ranging from basic watershed management principles to the application of more complex technical tools. (A summary of these courses is provided in this booklet.)

**Training Materials**, which include an information transfer series with numerous documents that highlight institutional/organizational and technical aspects of implementing watershed approaches. These documents, are listed in this booklet, as well as additional materials such as videos, CD-ROMs, and software.

**Watershed Management Facilitations**, in which the Academy assists states and tribes in reorienting their water resource management programs to implement watershed approaches.

**Website/Academy 2000**, in which EPA makes its publications, course summaries, and schedules available on the Internet. The website also includes a distance learning program of self-paced training modules called Academy 2000 to serve those who cannot attend the live courses. The address is <<http://www.epa.gov/owow/watershed/wacademy.htm>>.

\* A watershed approach is a coordinating framework that focuses community efforts on addressing priority problems within a watershed.

## Training Courses

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The Watershed Academy offers several of its own training courses supporting watershed approaches and publicizes watershed courses sponsored by others, including EPA's Office of Water, other federal agencies, and nongovernmental organizations. Watershed-related training courses that are generally available through EPA's Watershed Academy and Office of Water are summarized below. The blue insert provides a listing of the currently scheduled courses and will be updated periodically. To find the latest information on course schedules, go to the Academy website at <http://www.epa.gov/owow/watershed/wacademy.htm>.

*For information on watershed-related courses sponsored by other federal agencies and others, readers may want to obtain a copy of the Watershed Academy Catalogue of Watershed Training Opportunities, which includes descriptions of 75 EPA and non-EPA courses (see p. 16 for more information on this catalogue). EPA will update this catalogue in 1998.*

### ***Watersheds 101: Applied Watershed Management***

This 2-day course applies the core principles of watershed management to local and state watershed management issues. Through a combination of lectures, exercises, case studies, and interactive sessions, participants work through a watershed management cycle, review a variety of watershed frameworks, explore ways to leverage efforts, and improve decision-making skills. This course is targeted toward individuals who have some background knowledge about watershed management and are interested in learning ways to design or strengthen their long-term management framework.

This course is sponsored by USEPA Office of Water, Office of Wetlands, Oceans and Watersheds (OWOW) and is intended for watershed managers, staff, and program leaders from states, tribes, and territories; local governments; EPA regional and headquarters staff; watershed associations; and other interested watershed practitioners.

*[For more information, contact Watershed Academy, USEPA (4503F), 401 M Street, SW, Washington, DC 20460; (202) 260-5368 phone; (202) 260-1977 fax; [wacademy@epamail.epa.gov](mailto:wacademy@epamail.epa.gov)]*

### ***Watersheds 102: Statewide Approach to Watershed Management***

This 2-day course provides in-depth, comprehensive training in statewide approaches to watershed management. Drawing on experiences from more than 15 states, the course reviews key elements of statewide management frameworks, including but not limited to considerations for designing stakeholder forums, strategic monitoring and assessment, priority setting, and development and implementation of integrated strategies. Practical tools for implementing watershed approaches are introduced.

This course is sponsored by USEPA Office of Water, Office of Wetlands, Oceans and Watersheds (OWOW) and is intended for state water resource managers and their potential watershed management partners, including local governments, tribes, watershed groups, and others. It may be sponsored for a single-state workgroup wanting to learn more about other states' watershed frameworks as it begins to design or refine its own approach, or sponsored for a region with multiple states that are ready to develop or enhance their watershed approaches.

*[For more information, contact Watershed Academy, USEPA (4503F), 401 M Street, SW, Washington, DC 20460; (202) 260-5368 phone; (202) 260-1977 fax; [wacademy@epamail.epa.gov](mailto:wacademy@epamail.epa.gov)]*

### ***Watersheds 103: TMDL Training for State Practitioners***

This 2- to 3-day course reviews the technical components for developing total maximum daily loads (TMDLs) under Section 303(d) of the Clean Water Act (CWA). Section 303(d) establishes the TMDL program. Under the program, states must develop lists of waters that do not meet state water quality standards even after the application of technology-based and other required controls, and must establish priority rankings for waters on the list. States must then develop TMDLs for waters on the list. TMDLs specify the amount of a pollutant that needs to be reduced to meet state water quality standards and allocate pollutant loadings among pollution sources in a watershed. The focus of this training is on how to develop TMDLs using a combination of lectures, group exercises, and case studies.

This course is sponsored by USEPA Office of Water, Office of Wetlands, Oceans and Watersheds (OWOW) and the Office of Science and Technology (OST). It is a technical course intended for those who will actually be developing TMDLs, including technical water resources staff and watershed managers from states, tribes, and territories; local governments; EPA regional and headquarters staff; and other interested watershed practitioners. This course is currently under development.

*[For more information, contact Watershed Academy, USEPA (4503F), 401 M Street, SW, Washington, DC 20460; (202) 260-5368 phone; (202) 260-1977 fax; wacademy@epamail.epa.gov]*

#### ***Watersheds 104: Executive Overview of the Watershed Approach***

This half-day course is intended to help senior managers explore the rationale for implementing statewide watershed management and provides a conceptual framework for carrying out the process of integrating natural resource management programs on a watershed basis. Participants examine the elements of watershed-based organizational management and discuss how the approach can address any difficult challenges facing managers.

This course is sponsored by USEPA Office of Water, Office of Wetlands, Oceans and Watersheds (OWOW) and is intended for watershed managers, staff, and program leaders from states, tribes, and territories; local governments; EPA regional and headquarters staff; and other interested watershed practitioners.

*[For more information, contact Watershed Academy, USEPA (4503F), 401 M Street, SW, Washington, DC 20460; (202) 260-5368 phone; (202) 260-1977 fax; wacademy@epamail.epa.gov]*

#### ***Watersheds 105: Watershed Management Tools Primer***

This 2-day course provides introductions to a number of tools that can help practitioners carry out the watershed management process. The tools overviewed in this course include watershed assessment methods, modeling, risk assessment, issue prioritization, methods for targeting actions, strategic monitoring, evaluation techniques, and information management. Each session covers two or three tools selected from this list.

This course is sponsored by USEPA Office of Water, Office of Wetlands, Oceans and Watersheds (OWOW) and is intended for watershed managers, staff, and program leaders from states, tribes, and territories; local governments; EPA regional and headquarters staff; and other interested watershed practitioners.

*[For more information, contact Watershed Academy, USEPA (4503F), 401 M Street, SW, Washington, DC 20460; (202) 260-5368 phone; (202) 260-1977 fax; wacademy@epamail.epa.gov]*

#### ***Watersheds 106: Watershed Partnership Seminar***

This 2-week course emphasizes the establishment and maintenance of watershed-based partnerships among aquatic resource professionals and citizens

representing the diversity of interests necessary to build healthy and sustainable watersheds. It provides an overview of basic ecological principles related to watershed planning and describes the benefits of watershed management. The course focuses on personal and group skills useful to all participants in successful watershed projects. The course blends consensus-building skills, technical knowledge, and ways in which representatives of various interests can work effectively together. Topics include negotiation, facilitation, local decision making, watershed ecology, and team-building skills. Modules are taught by people involved in cooperative watershed projects.

This course, limited to 40 people, is sponsored by USEPA Office of Water, Office of Wetlands, Oceans and Watersheds (OWOW) and is intended for EPA regional and headquarters staff; staff from other federal agencies; state, tribal, and local agencies; environmental organizations; and other interested parties.

*[For more information, contact Watershed Academy, USEPA (4503F), 401 M Street, SW, Washington, DC 20460; (202) 260-6045 phone; (202) 260-1977 fax; wacademy@epamail.epa.gov]*

### ***Watersheds 107: Using Internet Resources***

What's your watershed address? Want to know who else is working on similar issues in your area? Looking for that perfect map of your watershed with the information layers you need on it? Several Internet programs provide tremendous amounts of information, such as:

- Basic hydrologic units in the contiguous United States
- Conditions and vulnerability of aquatic resources in those watersheds
- Information on partnerships at work to protect and restore those resources
- Access to government programs and services

Participants will learn how to access these Internet services and make best use of them to meet their needs. The course will include a feedback session designed to help identify how these Internet services need to be adapted to best help local communities.

This course is sponsored by USEPA Office of Water, Office of Wetlands, Oceans and Watersheds (OWOW) and is intended for those who want an introduction to using the Internet to find tools for water resource management.

*[For more information, contact Watershed Academy, USEPA (4503F), 401 M Street, SW, Washington, DC 20460; (202) 260-5368 phone; (202) 260-1977 fax; wacademy@epamail.epa.gov]*

### ***Interagency Course on Working at a Watershed Level***

This week-long training course was designed and developed by a multi-agency working group with additional input from state, local, and academic institutions. It provides a basic but very broad foundation of scientific and social principles useful in guiding watershed management activities. The six training units move logically through a discussion of how watersheds work, how change occurs in watersheds, methods to assess watershed conditions and plan for management, watershed management practices, and the all-encompassing social and cultural context for watershed management. The course combines oral presentations with discussions, exercises, examples, and case studies.

This course is sponsored by USEPA Office of Water, Office of Wetlands, Oceans and Watersheds (OWOW) in partnership with other agencies and organizations; sponsors vary with each event and include federal agency training centers and universities. The broad target audience includes nonscientists without a watershed science background, technical specialists who seek a broader perspective, managers or decision-makers, and informed citizens. The course can be adapted to the specific audience at each session.

*[For more information, contact Watershed Academy, USEPA (4503F), 401 M Street SW, Washington, DC 20460; (202) 260-5368 phone; (202) 260-1977 fax; wacademy@epamail.epa.gov]*

### ***Interagency Course on Framework for Stream Corridor Restoration***

This week-long training course was designed and developed by a multi-agency working group with additional input from state, local, and academic institutions. It provides a framework for supporting an interdisciplinary approach to stream corridor restoration initiatives. Lessons begin with an introduction to the ecological processes, structure, and functions within a stream corridor and watershed, and follow sequentially through five more main themes: characterization and condition analysis, partnerships, planning and implementation, monitoring, and managing a restoration initiative. The course combines oral presentations with discussions, exercises, examples, and case studies.

This course is sponsored by USEPA Office of Water, Office of Wetlands, Oceans and Watersheds (OWOW) in partnership with other agencies and organizations; sponsors vary with each event. The broad target audience includes nonscientists without a watershed science background, technical specialists who seek a broader perspective, managers or decision-makers, and informed citizens. The course can be adapted to the specific audience at each session.

*[For more information, contact Watershed Academy, USEPA (4503F), 401 M Street SW, Washington, DC 20460; (202) 260-5368 phone; (202) 260-1977 fax; wacademy@epamail.epa.gov]*

### ***BASINS: A Powerful Tool for Managing Watersheds***

This week-long course is designed to provide technical training and guidance to states and Indian tribes in using Better Assessment Science Integrating point and Nonpoint Sources (BASINS) to perform integrated water quality and watershed analyses. The course covers an introduction to the basic geographic information system (GIS) operations, BASINS environmental data layers, nonpoint source modeling, and in-stream water quality assessments. The course includes extensive hands-on computer applications.

This course is sponsored by USEPA Office of Water, Office of Science and Technology (OST). Persons interested in watershed management, development of total maximum daily loads (TMDLs), coastal zone management, nonpoint source programs, water quality modeling, National Pollutant Discharge Elimination System (NPDES) permitting, and other related programs are urged to attend. Participants should have a background in water quality modeling, a basic understanding of GIS applications, and familiarity with the Windows environment. Familiarity with ArcView (ver. 3) basic operations is a plus.

*[For more information, contact Andy Battin, USEPA (4305), 401 M Street, SW, Washington, DC 20460; (202) 260-3061 phone; (202) 260-9830 fax; battin.andrew@epamail.epa.gov]*

### ***Clean Water Act Section 404 Regulatory Issues Training Course***

This 2- to 3-day course provides an introduction to issues associated with the implementation of the Clean Water Act Section 404 regulatory program. The course presents information on the Section 404(b)(1) Guidelines requirements, the scope of regulated activities, Section 404(f) exemptions, mitigation requirements, and procedures for elevating cases under Sections 404 (q) and (c).

This course is sponsored by USEPA Office of Water, Office of Wetlands, Oceans and Watersheds, Wetlands Division, and is intended for EPA regional and headquarters staff and staff from other federal, state, and tribal agencies seeking greater familiarity with the Section 404 program requirements. The course is taught by EPA regional and headquarters staff with expertise in the subject areas. Although there is no tuition for the course, course enrollment is limited, with priority given to EPA wetlands staff.



*[For more information, contact Peter Mali, USEPA Wetlands Division (4502F), 401 M Street, SW, Washington, DC 20460; (202) 260-0044 phone; (202) 260-7546 fax; mali.peter@epamail.epa.gov]*

### ***Getting in Step: A Pathway to Effective Outreach in the Watershed***

This course provides participants with a framework to develop and implement successful outreach programs in their watersheds. Through a combination of presentations, group exercises, and panel discussions, participants learn the process for developing an outreach strategy, discover tips and tools to produce eye-catching materials, and learn ways to effectively distribute their message.

This course is taught by the Council of State Governments and Tetra Tech, Inc., with USEPA Office of Wetlands, Oceans and Watersheds (OWOW) funding support. It is intended for audiences responsible for implementing watershed protection efforts on a federal, state, tribal, or local level.

*[For more information contact Barry Tinning, Council of State Governments, P.O. Box 11910, 3560 Iron Works Pike, Lexington, KY 40578-1910; (606) 244-8228 phone; (606) 244-8239 fax; btonning@csg.org]*

### ***Izaak Walton League of America Stream Doctor™ Restoration Workshop***

The purpose of the Stream Doctor™ Restoration Workshop is to provide volunteers, government employees, businesses, and others with a chance to learn about environmentally sound approaches to stream habitat restoration using bioengineering. Bioengineering combines the use of vegetation and natural structures to stabilize eroding streambanks and to protect habitat. Participants exchange ideas about watershed protection and learn about cost-effective restoration projects. The workshop includes presentations by stream restoration experts; hands-on training in stream monitoring, site assessment, and plan design; advice about project budgeting; and information about post-project maintenance.

This course is taught by the Izaak Walton League of America with funding from USEPA Office of Water, Office of Wetlands, Oceans and Watersheds (OWOW) and others. The workshop is designed to accommodate people of different backgrounds and knowledge. Attendees receive a restoration handbook, video, general information, and much more at this 2-day workshop.

*[For more information, contact Julie Vincentz Middleton, Izaak Walton League of America, 707 Conservation Lane, Gaithersburg, MD 20878; (301) 548-0150 phone; (301) 548-0146 fax]*

### ***Local Government Workshops: Tools for Watershed Protection***

This 2-day course assists local officials in protecting aquatic resources by providing information on both regulatory and nonregulatory tools available to them for resource protection, including innovative zoning ordinances, land acquisition techniques, tax incentives, and others. A watershed framework is emphasized in presenting these techniques, and some course time is devoted to explaining the basic hydrology of, and potential impacts on, a watershed.

Specific areas of focus include identification and evaluation of impacts to coastal and fresh waters; regulatory techniques for restoring and managing aquatic resources, including transfer of development rights, overlays and watershed zoning, health regulations, stormwater management, and riparian corridor zoning; nonregulatory techniques, including land acquisition, public education, conservation easements, and constructed wetlands; financing methods for protection programs; and case studies of relevant successes and failures.

This course is sponsored by USEPA Office of Wetlands, Oceans and Watersheds, Oceans and Coastal Protection Division. The intended audience for this course includes local and state government officials, planners, public works and health officials, scientific and technical personnel, and others involved in land and water resource management and protection.

*[For more information, contact Macara Lousberg, USEPA (4504F), 401 M Street, SW, Washington, DC 20460; (202)260-9109 phone; (202)260-9960 fax; [lousberg.macara@epamail.epa.gov](mailto:lousberg.macara@epamail.epa.gov)]*

### ***NPDES Permit Writers' Course***

This 5-day training course provides the basic regulatory framework and technical considerations that support the development of wastewater discharge permits required under the National Pollutant Discharge Elimination System (NPDES). A multidisciplinary faculty presents the course using a combination of lectures, case examples, and practical exercises. The course begins with an introduction to the history of the NPDES program and its relationship to other Clean Water Act programs. Attention is given to the role of NPDES permitting within a watershed management approach. Participants then become acquainted with the tools and resources available to assist them in writing NPDES permits.

The course is presented by USEPA Office of Wastewater Management (OWM). It was designed for new permit writers with little or no experience in the NPDES program. Veteran permit writers, permit holders, and staff from other environmental programs also find the course useful and enjoyable and make up a growing percentage of course participants.

*[For more information, contact Dan Weese or Greg Currey, USEPA (4203), 401 M Street, SW, Washington, DC 20460; (202) 260-6809 or (202) 260-1718 phone; (202) 260-1460 fax; weese.daniel@epamail.epa.gov or currey.gregory@epamail.epa.gov]*

### **Source Water Assessment Seminars**

American Water Works Association (AWWA) in conjunction with EPA will hold a series of 2-day seminars around the United States during the late fall of 1998 and early spring of 1999 to equip water suppliers with the tools necessary to implement source water protection strategies. The training will cover issues such as how to apply segmentation and risk hierarchy concepts, how to conduct contaminant inventories, how to make decisions about water supply susceptibility and vulnerability, and how to effectively use implementation strategies available, both regulatory and nonregulatory. The seminars will be tailored to the state source water assessments in each region, and will include panel discussions with state source water managers to ensure that public water suppliers are current with the state's intended source water assessment plan, their role in the delineation and assessment process, and how they can use the information to best protect their sources of supply.

The seminars are sponsored by the American Water Works Association in conjunction with the USEPA Office of Ground Water and Drinking Water. The intended audience is water suppliers and local government officials. Information concerning the dates, locations, and registration materials for these seminars will be posted on AWWA's home page under Education Events at <http://www.awwa.org>.

*[For more information, contact Betsy Henry, USEPA (4606) 401 M Street, SW, Washington, DC 20460, (202) 260-2399 phone; henry.betsy@epamail.epa.gov; or Susan Miller, AWWA, 6666 West Quincy Avenue, Denver, CO 80235; (303) 347-6181 phone; (303) 794-8915 fax; smiller@awwa.org]*

### **Source Water GIS Workshops**

USEPA will sponsor Source Water GIS workshops to provide hands-on GIS training for state water program managers. The workshops will focus on the tools available to help managers complete the source water assessments, particularly susceptibility determinations. EPA Regions 8 and 7 will hold workshops in Denver, Colorado (February 1998) and Kansas City, Missouri (March 1998). Workshops may be held in other locations throughout the year.

The course is sponsored by USEPA Regions 8 and 7 and the USEPA Office of Ground Water and Drinking Water. The target audience for the course is state water program managers.

*[For more information, contact Steve Ainsworth, USEPA (4606), 401 M Street, SW, Washington, DC 20460; (202) 260-7769 phone; (202) 260-0732 fax; ainsworth.steve@epamail.epa.gov]*

### ***SRF Funding Framework Workshops:***

#### ***Integrating the SRF with Statewide or Watershed Goals***

The 10 regional EPA offices will host workshops on the Clean Water State Revolving Fund (CWSRF) Funding Framework in 1998. The CWSRF Funding Framework promotes the use of watershed-based integrated priority-setting systems for establishing CWSRF funding priorities. The workshops will provide members of the SRF community with a foundation in priority setting and a background on regional water quality issues. The workshops will also provide members of the watershed community (NPS, estuary, wetlands, ground water, and watershed planners) at the state level with an understanding of the CWSRF and how to make use of its vast resources to address water quality problems. Participants will learn how to develop integrated priority-setting systems and how to get individual water quality projects listed and funded by the CWSRF. Case studies of state programs that have developed integrated priority-setting systems in response to the Funding Framework will be given. State and local program managers in the SRF, nonpoint source, estuary, wetlands, ground water, and watershed communities who are interested in participating in the workshops should contact their regional CWSRF representative:

- Region 1 (CT, ME, MA, NH, RI, VT), Ralph Caruso (617) 565-3617
- Region 2 (NJ, NY, PR, VI), Bob Gill (212) 637-3884
- Region 3 (DE, DC, MD, PA, VA, WV), Don Niehus (215) 566-5705
- Region 4 (AL, FL, GA, KY, MS, NC, SC, TN),  
Sheryl Parson (404) 562-9337
- Region 5 (IL, IN, MI, MN, OH, WI), Gene Wojcik (312) 886-0174
- Region 6 (AR, LA, NM, OK, TX), Velma Smith (214) 665-7153
- Region 7 (IA, KS, MO, NE), Donna Moore (913) 551-7741
- Region 8 (CO, MT, ND, SD, UT, WY), Brian Friel (303) 312-6277
- Region 9 (AZ, CA, HI, NV, AS, GU), Juanita Licata (415) 744-1948
- Region 10 (AK, ID, OR, WA), Lee Daneker (206) 553-1380

### ***Stream Investigation and Stabilization Workshop***

Through lectures, case histories, and field site reconnaissance, this 2- to 5-day workshop will provide a comprehensive, overall systems approach to stream stabilization. The course will cover a wide range of techniques ranging from traditional approaches such as bank paving and stone dikes to low-cost innovative techniques such as bendway weirs, longitudinal peaked toe, and the bioengineering willow pole curtain and post methods. In addition, lectures will cover stream hydraulics and sediment transport, stream stability, field investigation equipment and safety, and project monitoring and maintenance. Course participants will receive a comprehensive manual containing design criteria and photographs of alternative approaches written in layman's language. This course is typically 2 days; however, longer or shorter courses can be arranged to meet your specific needs.

This course is taught by the U.S. Army Corps of Engineers, Waterways Experiment Station, with funding support from USEPA Office of Wetlands, Oceans and Watersheds, Assessment and Watershed Protection Division. The broad target audience for this course includes nonscientists without science background, technical specialists who seek a broader perspective, managers or decision-makers, and informed citizens. The course can be adapted to the specific audience at each session.

*[For more information, contact David Derrick, U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Mississippi 39180-6199; (601) 634-2651 phone; (601) 634-2823 fax; derrickd@mail.wes.army.mil]*

### ***Stream Processes, Assessment and Restoration Workshop***

This 3-day technology transfer workshop was developed by Ecosystem Recovery Institute to introduce the fundamental concepts of stream processes, restoration, design, and construction in an ecosystem context. The workshop focuses on the basis of:

- Stream processes
- Inventory techniques
- Assessment of stream condition
- Restoration strategies and applications
- Design and construction issues

Emphasis is placed on incorporating stream mechanics, natural channel geometry, stability concepts, and an ecosystem approach into projects or management programs involving streams.

This 3-day session is offered in a classroom and field review format. It is designed and taught by instructors with expertise in fluvial geomorphology, hydrology, stream ecology, forestry, riparian management, watershed planning, and restoration construction and management.

This workshop is taught by Ecosystem Recovery Institute with funding support from USEPA, Office of Wetlands, Oceans and Watersheds, Assessment and Watershed Protection Division. The workshop is designed for conservation districts, state and local resource agencies, Indian tribes, watershed civic groups, and others interested in watershed management with a need for technical and field exposure to stream management and restoration principles.

*[For more information, contact Mike Hollins, Ecosystem Recovery Institute, P.O. Box 249, Freeland, MD 21053; (717) 235-8426 phone; (717) 227-0484 fax; recins@aol.com]*

### ***Volunteer Monitoring for Estuaries***

USEPA sponsors volunteer estuary monitoring workshops nationwide to encourage volunteer monitoring in estuaries, to enhance networking among programs, and to improve the quality of volunteer data. In addition, the workshops help encourage and assist volunteer monitoring coordinators to be more effective in all aspects of planning and implementation of volunteer monitoring. Specific topics include methods, quality assurance, working with the news media, networking, creative funding, data management, and use of the Internet.

In partnership with the Center for Marine Conservation and with funding support provided by USEPA Office of Wetlands, Oceans and Watersheds, Oceans and Coastal Protection Division, these workshops are conducted in coastal areas nationwide, particularly in areas where National Estuary Programs are located. Past workshops have been held in Norwalk, Connecticut; Seattle, Washington; Wachapreague, Virginia; Tampa, Florida; Galveston, Texas; New Bedford, Massachusetts; and Richmond, California. Three or more workshops are being planned for 1998.

The intended audience for these workshops includes volunteer monitoring coordinators who manage a group of volunteers in monitoring estuarine areas and is limited to 40 or fewer participants.

*[For more information, contact Joe Hall, USEPA (4504F), 401 M Street, SW, Washington, DC 20460; (202) 260-9082 phone; hall.joe@epamail.epa.gov, or Heather Green, Center for Marine Conservation, 1432 North Great Neck Rd., Suite 103; Virginia Beach, VA 23454; (757) 496-0920 phone; (757) 496-3207 fax]*

### ***Water Quality Standards Academy***

The Water Quality Standards Academy is a 5-day, basic introductory course designed for those with fewer than 6 months of experience with the water quality standards and criteria programs. Others may also benefit, including veterans of the water quality standards program who want a refresher course. Water quality standards are adopted by states and Indian tribes as laws or regulations. Water quality standards are the backbone of the watershed protection approach to pollution control.

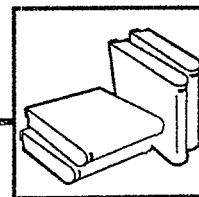
The Water Quality Standards Academy is a comprehensive and highly structured course that introduces participants to all aspects of the water quality standards and criteria programs, including the interpretation and application of the water quality standards regulation; policies and program guidance; the development of water quality criteria (human health, aquatic life, sediment, and biological); and all other facets of the program.

This course is sponsored by USEPA Office of Science and Technology (OST).

*[For more information contact Micki Treacy, USEPA (4305), 401 M Street, SW, Washington, DC 20460; (202) 260-7301 phone; (202) 260-9830 fax; treacy.micki@epamail.epa.gov]*

## Training Materials

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### *Information Transfer Series Publications*

The Watershed Academy has published the following documents on different aspects of implementing watershed approaches through its Information Transfer Series. All of these publications are available at no charge from the National Center for Environmental Publications and Information (NCEPI) at (800) 490-9198, (513) 489-8190, (513) 489-8695 (fax). Please include the document name and number when requesting publications. You may also download these publications from the Watershed Academy website. The website address is <http://www.epa.gov/owow/watershed/wacademy.htm>.

*Watershed Protection: A Project Focus* (EPA 841-R-95-003)—provides a blueprint for designing and implementing local watershed protection programs.

*Watershed Protection: A Statewide Approach* (EPA 841-R-95-004)—provides guidance for reorienting statewide water programs to a watershed approach.

*Monitoring Consortia: A Cost-Effective Means to Enhancing Watershed Data Collection and Analysis* (EPA 841-R-97-005)—contains case studies on effective ways to share monitoring costs and data.

*Land Cover Digital Data Directory for the U.S.* (EPA 841-B-97-005)—helps watershed managers find geographic information system data on land use/land cover.

*Designing An Information Management System for Watersheds* (EPA 841-R-97-005)—provides an introduction to information management for local watershed managers.

*Information Management for the Watershed Approach in the Pacific Northwest* (EPA 841-R-97-004)—describes the state of Washington's experiences and recommendations for data clearinghouses to help watershed information exchange.

*Watershed Academy Catalogue of Watershed Training Opportunities* (EPA 841-D-97-001)—includes descriptions of 75 EPA and non-EPA courses and dates for the courses.



*Statewide Watershed Approach Facilitation* (EPA 841-R-97-011)—describes how a number of states have created new statewide frameworks to reorient existing water programs along watershed lines.

*Watershed Approach Framework* (EPA 840-S-96-001)—explains EPA's vision for watershed approaches.

*Top 10 Watershed Lessons Learned* (EPA 840-F-97-001)—highlights lessons learned by watershed practitioners implementing the watershed approach.

*Catalog of Federal Funding Sources for Watershed Protection* (EPA 841-B-97-008)—provides information on 52 federal grant or loan programs.

*Watershed Training Opportunities* (EPA 841-B-98-001)—provides information on watershed training opportunities sponsored by EPA's Office of Water and its Watershed Academy.

### ***Videos***

EPA has developed a series of 10 videos on various subjects related to water quality standards and criteria. The video titles and a short description of each appear below.

*Introduction to Water Quality Standards* (EPA 823-V-92-001)—provides an overview of the water quality standards and criteria programs. Discusses the three component parts of state and Indian tribal water quality standards: uses, criteria and the antidegradation policy.

*Development of Water Quality Criteria and Its Relationship to Water Quality Standards* (EPA 823-V-90-002)—provides an overview of water quality criteria including how they are developed.

*Antidegradation Policy: A Means to Maintain and Protect Existing Uses and Water Quality* (EPA 823-V-90-003)—discusses the three tiers in EPA's antidegradation policy.

*Water Quality-Based Approach to Pollution Control* (EPA 823-V-91-002)—provides an overview of the eight interrelated stages in the water quality based-approach to pollution control.

*Water Quality Standards and 401 Certification* (EPA 823-V-91-001)—discusses water quality standards and the 401 certification process.

*Economic Considerations in Water Quality Standards* (EPA 823-V-90-001)—discusses why economics may be considered, describes where in the water quality standards process economics are considered, and discusses how economic considerations are used in the water quality standards process.

*Water Quality Standards on Indian Lands* (EPA 823-V-92-002)—discusses the role that water quality standards play in efforts to clean up and to protect the quality of the nation's waters. Discusses the criteria that must be met for an Indian tribe to conduct the water quality standards program on reservation lands and discusses the issue dispute resolution mechanism that is used to resolve any unreasonable consequences that may arise when an Indian tribe and a state adopt differing water quality standards on a common body of water.

*Development of Biological Criteria for Use in Water Quality Standards* (EPA 823-V-92-003)—discusses biological criteria as they relate to the water quality standards and criteria programs. Biological criteria are based on direct measures of the biological integrity of surface waters and thus provide a valuable assessment tool for evaluating the quality of our nation's waters.

*Developing Site-Specific Criteria* (EPA 823-V-95-001)—discusses the development of site-specific numeric criteria for aquatic life and the role they play in the water quality standards and criteria process. Focuses on the indicator species criteria, one of the procedures that may be used to develop numeric site-specific criteria.

*Wetlands Water Quality Standards* (EPA 840-V-96-001)—provides an overview on how states and Indian tribes can develop water quality standards for wetlands.

Cost: These videos are available on loan for a period of 30 days. When ordering, use the EPA order numbers referenced above.

[For more information, contact the Water Resource Center (RC-4100), 401 M Street, SW, Washington, DC 20460; (202) 260-7786 phone]

## **Software**

### **BASINS**

Better Assessment Science Integrating point and Nonpoint Sources (BASINS) is a system that can be used to perform integrated water quality and watershed analyses. It combines a geographic information system (GIS), national GIS data

layers, and state-of-the-art environmental assessment and modeling tools into one convenient package. The BASINS software allows a user to quickly assess large amounts of point source and nonpoint source data in a format that is easy to understand. Installed on a personal computer, BASINS allows a user to assess water quality at selected stream sites or throughout an entire watershed.

Contact: A vast array of information pertaining to BASINS is available on EPA's website, including technical support. The BASINS home page is accessible at <<http://www.epa.gov/OST/BASINS>>.

#### **Software Available for Environmental Awareness**

USEPA Region 5 and Purdue University have published at least 44 software programs that provide information on various topics relating to environmental awareness. Sample topics include environmental assessments, public health, wetlands, water education, wellhead protection, best management practices for soil erosion, and many others. The software is available on CDROM or on 3½-inch diskettes provided by the requester, or can be downloaded from the SEAHOME website. The complete listing of software and the latest information about upcoming releases can be obtained from the SEAHOME website at <<http://www.epa.gov/seahome>>.

*[For more information, contact Karen Reshkin, USEPA Region 5, 77 West Jackson Blvd., Chicago, IL 60604-3590; (312) 353-6353 phone; or The Farm Building Plan Service, Purdue University, 1146 ABE Building, West Lafayette, IN 47907-1146; (765) 494-1173 phone; (765) 494-1356 fax; [fbps@ecn.purdue.edu](mailto:fbps@ecn.purdue.edu)]*

# *Watershed Management Facilitation*

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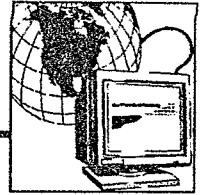
As states, tribes, and local governments around the country develop watershed management frameworks, they often use facilitators to guide them through a challenging process that includes examining what is possible and beneficial regarding watershed approaches (scoping), framework design and development, transition planning, and framework documentation. The Watershed Academy has supported facilitation efforts in more than 20 states, with services often including a portion or all of the following:

- Education on statewide watershed management and experiences in other states.
- Consultation on approaches for organizing and developing a statewide framework.
- Management of the process for designing and developing statewide frameworks.
- Neutral facilitation of discussion and consensus building.
- Mediation among framework development group members to resolve differences.
- Documentation of the framework to provide a long-term reference for a state.
- Assistance in making the transition to the new framework.

Facilitation services have varied for each state depending on its needs, perspectives, and available resources. States like Alaska, Nebraska, New Jersey, North Carolina, Tennessee, and Washington have used facilitation services for specific, short-term efforts aimed at “getting the ball rolling.” Other states such as Arizona, Delaware, Georgia, Kentucky, Texas, Utah, and West Virginia have used facilitation comprehensively to initiate, design, and establish a management framework. Learn more about facilitation at the Academy website at <http://www.epa.gov/owow/watershed/wacademy.htm>. In addition, EPA provides a variety of assistance to tribes to help enhance their watershed programs. Facilitation services are limited, but are available to both states and tribes.

## Website/Academy 2000

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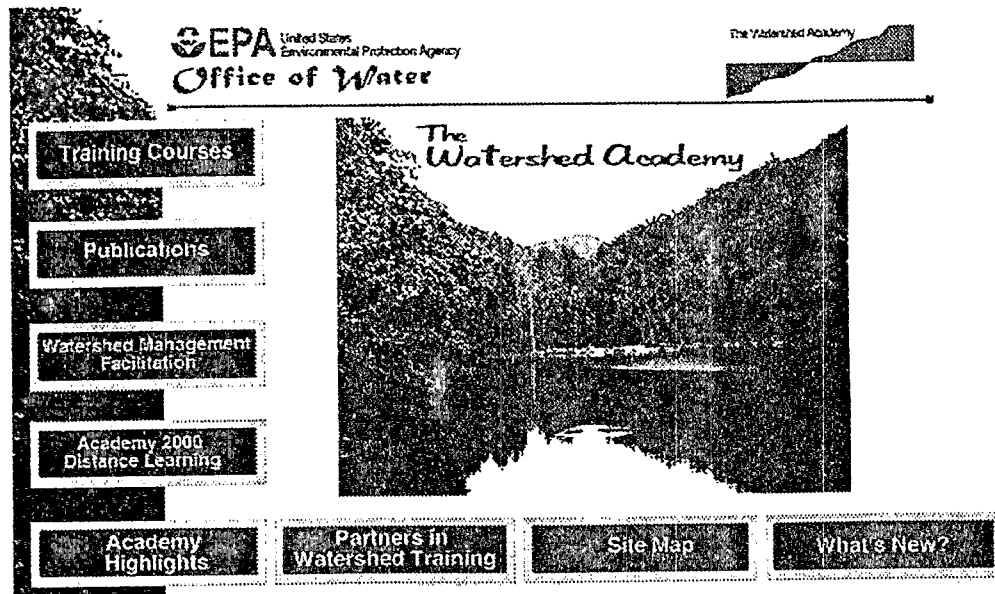
The Internet is a means to provide information and training to large numbers of people who cannot attend live courses in faraway locations. The Watershed Academy's website is intended to help EPA's message reach more people. The Watershed Academy home page (see p. 22) is accessible at

**<<http://www.epa.gov/owow/watershed/wacademy.htm>>**

Featured areas on this website parallel the key areas of the Watershed Academy described in this brochure, including training courses, publications, and watershed management facilitation. New additions and newsworthy announcements are covered in the "What's New?" and "Academy Highlights" areas, respectively. Links to other watershed websites and joint activities in course development are covered under "Partners in Watershed Training."

The area called "Academy 2000 Distance Learning" is being developed to explore different approaches to Internet-based distance learning. This part of the site consists of a set of training modules on a variety of watershed topics related to watershed science, effective communications, and organizational management and development. Some of these modules cover materials that EPA presents in its courses, and others concern topics outside the scope of the courses. Some example Academy 2000 modules include:

- Principles of Watershed Management
- Watershed Restoration
- Economics of Sustainability
- Monitoring Consortia
- Watershed Modeling
- Executive Overview of the Watershed Approach



*The Watershed Academy Home Page*

<<http://www.epa.gov/owow/watershed/wacademy.htm>>

# Watershed Training Course Schedule

***Mar. 9-11, 1998 Source Water GIS Workshops.***

Kansas City, KS (contact: Jason Clarke, USEPA Region 7, (913) 551-7216).

***Mar. 9-11, 1998 Stream Processes, Assessment and Restoration.***

Brownsville, TX (contact: Mike Hollins, Ecosystem Recovery Institute, (717) 235-8426).

***Mar. 14, 1998 Stream Processes, Assessment and Restoration.***

York, PA (contact: Mike Hollins, Ecosystem Recovery Institute, (717) 235-8426).

***Mar. 27, 1998 Watersheds 104: Executive Overview of the Watershed Approach.***

Lansing, MI (contact: Fred Cowles, MI DEQ, (517) 335-4127, fax (517) 373-9958).

***Apr. 6, 1998 Getting in Step: A Pathway to Effective Outreach in Your Watershed.***

Baton Rouge, LA. (contact: Jan Boydston, LA DEQ, (504) 765-0546).

***Apr. 13-17, 1998 BASINS Training.***

Washington, DC (contact: Hira Biswas, USEPA, (202) 260-7012).

***Apr. 16-17, 1998 Watersheds 105: Watershed Management Tools Primer.***

Montpelier, ID (contact: Craig Thomas, Bear Lake Regional Commission, (208) 945-2333).

***Apr. 25, 1998 Getting in Step: A Pathway to Effective Outreach in Your Watershed.***

Chicago, IL (contact: Bob Kirschner, NIPC (312) 454-0401, ext. 303, fax (312) 454-0411).

***Apr. 28-29, 1998 Watersheds 101: Applied Watershed Management.***

Kansas City, MO (contact: Julie Elfving, USEPA Region 7, fax (913) 551-7765).

***May 3, 1998 Instant Information: Finding the Resources You Need on the Internet.***

Denver, CO (contact: Nina Maxberry, Water Environment Federation, (703) 684-2400).

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***May 18-22, 1998 BASINS Training.***

Raleigh, NC (contact: Hira Biswas, USEPA, (202) 260-7012).

***Jun. 8-16, 1998 Watersheds 106: Watershed Partnership Seminar.***

Denver, CO (contact: Phil Oshida, USEPA, fax (202) 260-8000).

***Jun. 22-26, 1998 Working at a Watershed Level.***

Shepherdstown, WV (contact: Doug Norton, USEPA, (202) 260-7017, fax (202) 260-1977).

***July 27-31, 1998 Water Quality Standards Academy Basic Course for EPA Employees.***

Washington, DC (contact: Crystall Smith, The Cadmus Group, Inc., (703) 998-6862, ext. 170).

***Fall 1998 Watersheds 106: Watershed Partnership Seminar.***

Denver, CO (contact: Phil Oshida, USEPA, fax (202) 260-8000).

***Sept. 27, 1998 Getting in Step: A Pathway to Effective Outreach in Your Watershed.***

Rapid City, SD (contact: Ron Schierer, NRCS, (303) 236-2903 ext. 246).

***Oct. 1-3, 1998 Stream Processes, Assessment and Restoration.***

Austin, TX (contact: Mike Hollins, Ecosystem Recovery Institute, (717) 235-8426).