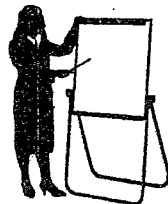
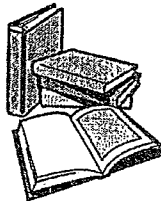




# **EPA Watershed Training Opportunities**



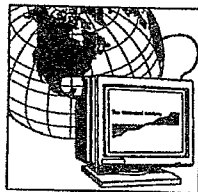
## **TRAINING COURSES**



## **TRAINING MATERIALS**



## **FACILITATION**



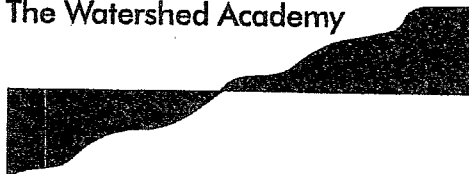
## **WEB-BASED TRAINING**

The Watershed Academy

• Information Transfer Series •

EPA 841-B-01-002  
March 2001

The Watershed Academy



• Information Transfer Series, No. 12 •

# **EPA Watershed Training Opportunities**



Assessment and Watershed Protection Division  
Office of Wetlands, Oceans and Watersheds  
U.S. Environmental Protection Agency (4503F)  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

## **Acknowledgments**

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

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EPA 841-B-01-002. Office of Water (4503F), United States Environmental Protection Agency, Washington, DC. 25 pp.

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

National Service Center for Environmental Publications (NSCEP)

Phone: (513) 489-8190, (800) 490-9198

Fax: (513) 489-8695

Internet: [www.epa.gov/ncepihom/ordering.htm](http://www.epa.gov/ncepihom/ordering.htm)

This booklet is available on the Internet at  
[www.epa.gov/owow/watershed/wacademy/its.html](http://www.epa.gov/owow/watershed/wacademy/its.html)

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# Introduction

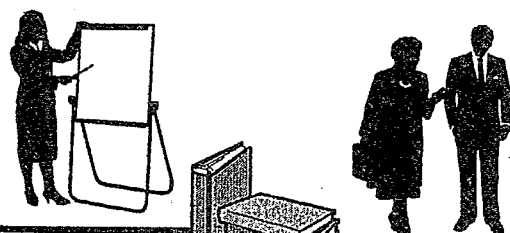
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The U.S. Environmental Protection Agency's Watershed Academy is a focal point in the Office of Water for providing training and information on implementing watershed approaches. This training is provided to federal, state, tribal, and local officials, as well as private practitioners of watershed management. The Watershed Academy has a web-based training program, sponsors its own training courses and develops training materials; it also publicizes watershed-related training materials and web sites developed by others, including other offices in EPA's Office of Water.

This booklet describes the watershed training opportunities sponsored by EPA's Office of Water and the Watershed Academy.

## What is the Watershed Academy?

---



EPA's Watershed Academy provides training and information on how to implement watershed approaches<sup>1</sup> to local, state, tribal, and federal officials and private practitioners of watershed management. The Watershed Academy consists of four key components:

1. **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.)
2. **Training Materials**, which include an information transfer series with numerous documents that highlight institutional/organizational/technical aspects of implementing watershed approaches. These documents, plus videos, CD-ROMs, and software (see page 19), are listed in this booklet.
3. **Watershed Management Facilitation**, in which the Academy assists states and tribes in reorienting their water resource management programs along watershed lines (see page 22).
4. **Web-Based Training**, at Watershed Academy Web ([www.epa.gov/watertrain](http://www.epa.gov/watertrain)), through which EPA offers over 40 free, self-paced training modules and a watershed management training certificate (see page 17).



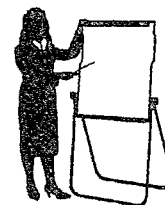
More detailed information on each of these four components, including training schedules, course summaries, and downloadable publications, is available through the Watershed Academy's web site at [www.epa.gov/owow/watershed/wacademy.htm](http://www.epa.gov/owow/watershed/wacademy.htm).

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<sup>1</sup>A watershed approach is a coordinating framework that focuses community efforts on priority problems within a watershed.

# Training Courses

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The Watershed Academy offers several training courses that support watershed approaches and also publicizes watershed courses sponsored by others, including EPA's Office of Water, other federal agencies, and nongovernmental organizations. The watershed-related training courses sponsored by EPA's Watershed Academy and Office of Water are summarized below. To obtain the latest schedule and training information, go to the Watershed Academy web site at [www.epa.gov/owow/watershed/wacademy/corsched.htm](http://www.epa.gov/owow/watershed/wacademy/corsched.htm). The course schedule includes contact information for course registration. Many courses are free but in some instances fees apply.

Please note that many of the EPA phone numbers will be changing during 2001 and 2002. If you have trouble phoning a course contact, please look up the new number at [www.epa.gov/epabome/locator.htm](http://www.epa.gov/epabome/locator.htm) or make contact via e-mail.

⇒ *For information on watershed-related courses sponsored by other federal agencies and others, you might want to obtain a copy of the Watershed Academy Inventory of Watershed Training Courses, which includes descriptions of 180 EPA and non-EPA courses (see p. 19 for more information on this Inventory).*

## WATERSHED ACADEMY TRAINING COURSES

### **Watersheds 101: The Clean Water Act: A Key Tool for Watershed Protection**

This 2-day course provides a fundamental understanding of each of the key Clean Water Act (CWA) programs, an overview of the overall framework of the law, and an explanation of the many links between CWA elements. The goal of the course is to provide trainees with broad knowledge that will enable them to answer most basic questions about regulatory tools, funding mechanisms, and other key elements of the CWA, as well as enhance their ability to help develop and implement holistic, integrated strategies for watershed protection and restoration.

The Watershed Academy also offers an expanded version of this course entitled "The Clean Water Act and Other Tools for Watershed Protection." This 3-day course includes the information mentioned above, along with information about other key federal statutes (Safe Drinking Water Act, Farm Bill, etc.) and selected innovative state and local tools (land acquisition, economic incentives, etc.).

These courses are sponsored by EPA's Office of Wetlands, Oceans and Watersheds, and are 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 the Watershed Academy, USEPA (4503F), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-5368; E-mail: [wacademy@epa.gov](mailto:wacademy@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 20 states, the course reviews key elements of statewide management frameworks, including 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.

EPA's Office of Wetlands, Oceans and Watersheds sponsors this course, which is intended for state water resource managers and their potential watershed management partners, including local governments, tribes, watershed groups, and others. The course 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 for a region with multiple states that are ready to develop or enhance their watershed approaches.

⇒ For more information, contact the Watershed Academy, USEPA (4503F), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-5368; E-mail: [wacademy@epa.gov](mailto:wacademy@epa.gov)

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

This 1-day course reviews the programmatic and technical components of developing Total Maximum Daily Loads (TMDLs) under Section 303(d) of the Clean Water Act (CWA). Section 303(d) requires that states, territories, and authorized tribes (hereafter referred to as "states") develop lists of waters that do not meet state water quality standards, even after the application of technology-based and other required controls. States must establish priority rankings for the waters on the list and develop TMDLs for the waters. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards and an allocation of that amount to the pollutant's sources. This training provides critical information on how the technical basis for a TMDL can be developed. The TMDL information is presented through lectures and relevant case study examples tailored to regional needs.

This course is sponsored by EPA's Office of Wetlands, Oceans and Watersheds and Office of Science and Technology. The course is intended for people that will actually develop TMDLs, including technical water resources staff and watershed managers from states, tribes, and territories; local governments; EPA regional and headquarters staff; and other watershed practitioners.

⇒ For more information, contact the Watershed Academy, USEPA (4503F), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-5368; E-mail: [wacademy@epa.gov](mailto:wacademy@epa.gov)

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### **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. It 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 EPA's Office of Wetlands, Oceans and Watersheds, and is intended for watershed managers, staff, and program leaders from states, tribes, and territories; local governments; EPA regional and headquarters staff; and other watershed practitioners.

⇒ For more information, contact the Watershed Academy, USEPA (4503F), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-5368; E-mail: [wacademy@epa.gov](mailto:wacademy@epa.gov)

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

This 2-day course introduces a number of tools that can help practitioners carry out the watershed management process. The tools explained 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 EPA's Office of Wetlands, Oceans and Watersheds, and is intended for watershed managers, staff, and program leaders from states, tribes, and territories; local



governments; EPA regional and headquarters staff; and other watershed practitioners.

⇒ For more information, contact the Watershed Academy, USEPA (4503F), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-5368; E-mail: [wacademy@epa.gov](mailto:wacademy@epa.gov)

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

Also known as *Healthy Watersheds: Community-based Partnerships for Environmental Decision Making*, this course emphasizes the establishment and maintenance of watershed-based partnerships among water resource professionals, local governments, 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, taught by people involved in cooperative watershed projects, focuses on personal and group skills useful to all participants in successful locally led, community-based environmental projects. The techniques learned in this course will help participants develop plans and strategies to meet the goals and priorities of several state, tribal, and federal watershed efforts, including Clean Water Act Programs (Sections 303(d) and 319).

This 2-week residential course is cosponsored by EPA's Office of Wetlands, Oceans and Watersheds and the U.S. Office of Personnel Management's Management Development Centers. It is intended for community representatives and environmental staff that are or will be using watershed- or community-based approaches for environmental protection. The course is recommended for EPA staff; staff from other federal agencies; state, tribal, and local agencies; environmental organizations; corporations; and other parties interested in building or participating in community-based environmental planning and decision making. The course is limited to 40 people and costs \$3,300 for tuition, lodging, and meals.

⇒ For more information, contact either the Watershed Academy, USEPA (4503F), 1200 Pennsylvania Avenue, NW, Washington, DC 20460; Phone: (202) 260-5368; E-mail: [wacademy@epa.gov](mailto:wacademy@epa.gov), or Great Leaders for Great Government Program, U.S. Office of Personnel Management, Western Management Development Center, 3151 South Vaughn Way, Suite 300, Aurora, CO 80014; Phone: (303) 671-1026; E-mail: [sjodonne@opm.gov](mailto:sjodonne@opm.gov)

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### **Watersheds 107: Landscape Ecology and Smart Growth**

This course presents an introduction to landscape ecology and its relevance to the watershed management mission, the emerging interest in smart growth, and day-to-day activities in environmental management. Landscape ecology draws upon many of the concepts, theories, and tools of ecology but applies them to the dynamics of larger (e.g., miles-wide) areas in the environment that have a consistent pattern of interacting human and natural components. Examples of landscapes include a forested landscape with occasional patches of agriculture, a heavily agricultural landscape with patchy wetlands and forests throughout, and an urban/suburban landscape with few patches of natural cover. Consistent landscape patterns often suggests consistency in the types of environmental problems found and management solutions. Clearly, measuring and analyzing landscape patterns is relevant to smart growth initiatives. Landscape ecology also makes extensive use of technologies such as remote sensing and geographic information systems (GIS). This course discusses these tools only as necessary to address concepts and their applications to landscape ecology.

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

⇒ For more information, contact the Watershed Academy, USEPA (4503F), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-5368; E-mail: [wacademy@epa.gov](mailto:wacademy@epa.gov)

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### **Watersheds 108: TMDL Training for Stakeholders**

This one-day course, still under development, is designed for people who wish to participate in the Total Maximum Daily Load (TMDL) listing, development, and scheduling process but are not directly responsible for developing TMDLs. The course materials will review the Clean Water Act, TMDL provisions, the TMDL listing process, TMDL development, and will discuss how interested individuals can become involved in the TMDL process. A pilot course is expected to be offered in the future, after which the course materials will be available for other trainers, such as state and EPA regional TMDL coordinators, to present to stakeholders in their jurisdictions.

EPA's Office of Wetlands, Oceans and Watersheds sponsors this course, which is intended for stakeholder groups such as agricultural and environmental communities, local government officials, and others from the public and private sectors.

⇒ *For more information, contact the Watershed Academy, USEPA (4503F), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-5368; E-mail: wacademy@epa.gov*

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### **A Framework for Stream Corridor Restoration (Interagency Course)**

This weeklong training course was designed and developed by a multiagency working group with input from state, local, and academic institutions. It provides a framework for supporting an interdisciplinary approach to stream corridor restoration initiatives. Lessons follow sequentially through seven main themes: an introduction to the ecological processes, structure, and functions in a stream corridor and watershed; characterization and condition analysis; developing a restoration plan; conceptual design; implementation; monitoring; and applying the lessons of the course. The course combines oral presentations with discussions, exercises, examples, and case studies.

EPA's Office of Wetlands, Oceans and Watersheds sponsors this course in partnership with several other agencies and organizations; sponsors vary with each event. The broad target audience includes people without a watershed science background, technical specialists that seek a broader perspective, managers or decision makers, and informed citizens. The course is taught by a variety of public agencies and Tetra Tech, Inc., and can be adapted to the specific audience at each session.

⇒ *For more information, contact the Watershed Academy, USEPA (4503F), 1200 Pennsylvania Avenue, NW, Washington, DC 20460, Phone: (202) 260-5368, E-mail: wacademy@epa.gov, or Tetra Tech, Inc. at (703) 385-6000; or visit [www.watershedtraining.net](http://www.watershedtraining.net)*

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### **Working at a Watershed Level (Interagency Course)**

This weeklong training course was designed and developed by a multiagency working group with input from state, local, and academic institutions. It provides a basic but very broad foundation of ecological, scientific, social, and management principles useful in guiding watershed assessment, planning, and management activities. The 6 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 socio-cultural context for watershed outreach, stakeholder involvement, and management. The course combines oral presentations with discussions, exercises, examples, and case studies.

This course is sponsored by EPA's Office of Wetlands, Oceans and Watersheds, 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 people without a watershed science background, technical specialists that seek a broader perspective, managers or decision makers, and informed citizens. The course is taught by various public agencies, universities, and

Tetra Tech, Inc., and can be adapted to the specific audience at each session.

- ⇒ For more information, contact (1) the Watershed Academy, USEPA (4503F), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-5368; E-mail: [wacademy@epa.gov](mailto:wacademy@epa.gov); (2) Tetra Tech, Inc., Phone: (703) 385-6000; Internet: [www.watershedtraining.net](http://www.watershedtraining.net); or (3) the Council of State Governments, Phone: (859) 244-8107

## **OTHER EPA OFFICE OF WATER TRAINING COURSES**

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

This weeklong course is designed to provide technical training and guidance to states, territories, and tribes using Better Assessment Science Integrating Point and Nonpoint Sources (BASINS) to perform integrated water quality and watershed analyses. The course covers an introduction to 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 training in computer applications.

EPA's Office of Science and Technology sponsors this course. 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 helpful.

- ⇒ For more information, contact Hira Biswas, USEPA (4305), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-7012; E-mail: [biswas.hira@epa.gov](mailto:biswas.hira@epa.gov)

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### **Channelization and Channel Modification Workshop**

This 2- to 3-day workshop provides general guidance for system-wide channel rehabilitation. The workshop teaches the basic fundamentals of geomorphology and channel processes along with fundamentals of engineering design methods for performing geomorphic evaluations, conducting field investigations, evaluating channel stability, and producing stable channel designs. Participants will participate in both lectures and field work.

This course is taught by the U.S. Army Corps of Engineers, Engineer Research and Development Center; EPA's Office of Wetlands, Oceans and Watersheds provides funding support. The broad target audience for this course includes people without science background, technical specialists that 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 Biedenbarn, U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, MS 39180-6199. Phone: (601) 634-4653; E-mail: [biedend1@mail.wes.army.mil](mailto:biedend1@mail.wes.army.mil)

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### **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 requirements of the Section 404(b)(1) Guidelines, 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 EPA's Office of Wetlands, Oceans and Watersheds, Wetlands Division, and is intended for staff of EPA regions and headquarters, and other federal, state, and tribal

agencies seeking greater familiarity with the Section 404 program requirements. Although there is no tuition for the course, course enrollment is limited, with priority given to EPA wetlands staff.

⇒ *For more information, contact Ann Roche, USEPA (4502F), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-5950; E-mail: roche.ann@epa.gov*

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### **Collaborative Resource Management (Interagency Course)**

This 4½-day course is designed to give federal employees that are involved in natural resource management the skills and tools needed for dealing with problems requiring collaborative processes. The course was developed because federal agencies are increasingly challenged to abandon traditional single-agency methods of doing business for new methods based on interagency partnerships and collaboration. This course provides some of the requisite skills needed to implement and participate effectively in partnership processes. It includes case studies, class exercises, and discussions about the stages of a collaborative process, the obstacles that must be overcome, and the special problems federal employees often encounter.

Developed by 13 federal agency sponsors, including the Bureau of Land Management, Forest Service, EPA, Fish and Wildlife Service, and National Marine Fisheries Service, the course is designed to be taught in an interagency context so that trainees can learn side-by-side, in a nonthreatening environment, with personnel from other agencies. The course content is aimed primarily at federal agency employees that are involved in resource management and are at grades GS 12 to 15.

⇒ *For more information, contact Elena Gonzalez, U.S. Department of the Interior, 4015 Wilson Boulevard, 11th floor, Arlington, VA 22203. Phone: (703) 235-3810; E-mail: elena\_gonzalez@ios.doi.gov*

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### **Community Culture and the Environment: A Guide to Understanding a Sense of Place**

This 1- to 2-day course teaches the concepts of community and culture and offers tools for assessing and understanding the social dynamics and local values involved in watershed protection. Using a dynamic, hands-on approach, the course provides a suggested assessment process and shows participants how they can use the results of the assessment for defining their community, building consensus/coalitions, communicating across cultures, visioning, planning, and developing indicators, among other uses. The guide includes sixteen community characteristics and related questions to help focus the assessment process. These characteristics range from community capacity, information flow, and local identity to demographics, property ownership, and governance. Seventeen tools and methods guide the collection of information. These tools include census and economic data, maps and geographic research, social mapping, interviewing, surveys, and visual methods. The course features easy-to-use worksheets, case studies from around the country, presentations, and highly interactive exercises that incorporate a mix of the characteristics and methods.

The course is sponsored and taught by EPA's Office of Wetlands, Oceans and Watersheds. It is intended for leaders of and academicians in watershed protection, as well as federal, tribal, state, and local agencies seeking technical skills for improving stakeholder involvement processes.

⇒ *For more information, contact Theresa Trainor, USEPA (4504F), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-3009; E-mail: trainor.theresa@epa.gov*

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### **Drinking Water Academy Training Courses**

Established by EPA's Office of Ground Water and Drinking Water, the Drinking Water Academy (DWA) is a long-term training initiative whose primary goal is to expand EPA, state, and tribal

capabilities to implement the 1996 Amendments to the Safe Drinking Water Act. To help address drinking water at the watershed level, the DWA offers four source water protection courses: (1) Introduction to EPA's Source Water Protection Programs, (2) Introduction to the Underground Injection Control Program, (3) Source Water Protection Area Delineation and Susceptibility Assessment: Technical Training, and (4) Underground Injection Control Inspector Certification Course. A fifth course, Source Water Contamination Prevention Measures, will be final in spring 2001. The DWA also offers a series of other drinking water-related courses in the following topic areas:

- Drinking Water Program Implementation (6 courses)
- Laboratory Certification (2 courses)
- Public Water System Supervision and Operation (3 courses)
- Sanitary Survey Training (4 courses)
- Safe Drinking Water Information Systems/Federal (SDWIS/FED) (6 courses)

To view course schedules, see the DWA website at [www.epa.gov/safewater/dwa.html](http://www.epa.gov/safewater/dwa.html)

⇒ For more information, contact James Bourne, USEPA (4606), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-5557; E-mail: [bourne.james@epa.gov](mailto:bourne.james@epa.gov)

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

This course provides participants with a framework for developing and implementing 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 tools to produce eye-catching materials, and learn ways to effectively distribute their message.

This course is taught by Tetra Tech, Inc., with funding support from EPA's Office of Wetlands, Oceans and Watersheds and other organizations. The course is intended for audiences responsible for implementing watershed protection efforts at the federal, state, tribal, or local level.

⇒ For more information, contact Barry Tonnig at Tetra Tech, Inc., 10306 Eaton Place, Suite 340, Fairfax, VA 22030. Phone: (703) 385-6000 ext. 160; E-mail: [tonniba@tetrattech-ffx.com](mailto:tonniba@tetrattech-ffx.com); Internet: [www.watershedtraining.net](http://www.watershedtraining.net)

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### **Getting in Step: Engaging and Involving Stakeholders in Your Watershed**

This course provides participants with a framework for developing and implementing successful stakeholder involvement strategies for watershed management programs. Through a combination of presentations, group exercises, and panel discussions, participants learn how to identify driving forces, identify appropriate stakeholder involvement levels, manage cooperative group processes, and move from awareness to action.

This course is taught by Tetra Tech, Inc., with funding support from EPA's Office of Wetlands, Oceans and Watersheds and other organizations. The course is intended for audiences responsible for implementing watershed protection efforts at the federal, state, tribal, or local level.

⇒ For more information contact Barry Tonnig at Tetra Tech, Inc., 10306 Eaton Place, Suite 340, Fairfax, VA 22030. Phone: (703) 385-6000 ext. 160; E-mail: [tonniba@tetrattech-ffx.com](mailto:tonniba@tetrattech-ffx.com); Internet: [www.watershedtraining.net](http://www.watershedtraining.net)

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### **Ground Water-Surface Water Interactions: Principles and Methods for Managers**

This 3-day field workshop is intended to train water resource managers on the principles and practices needed to manage surface and ground water in a watershed context. Presenters use

easy, practical methods to teach identification and mapping of interaction zones and related landscape features. The workshop combines classroom training with field work to ensure a solid understanding of both theory and application.

Sponsored by EPA and The University of Montana, this course is intended for state, tribal, and local water resource managers that have responsibility for watershed planning and protection of drinking water, wetlands, and related ecosystems. Participants should have some technical or scientific background.

⇒ For more information, contact the Flathead Lake Biological Station, The University of Montana, 311 Bio Station Lane, Polson, MT 59860-9659. Phone: (406) 982-3301; E-mail: [flbs@selway.umt.edu](mailto:flbs@selway.umt.edu); Internet: [www.umt.edu/biology/flbs](http://www.umt.edu/biology/flbs)

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

This 2-day course helps local officials to protect aquatic resources by providing information on 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 are identification and evaluation of impacts on coastal and fresh waters; regulatory techniques for restoring and managing aquatic resources, including transfer of development rights, overlays and watershed zoning, health regulations, storm water management, and riparian corridor zoning; nonregulatory techniques, including land acquisition, public education, conservation easements, and constructed wetlands; financing methods for protection programs; and relevant case studies.

This course is sponsored by EPA's Office of Wetlands, Oceans and Watersheds, Oceans and Coastal Protection Division. The intended audience 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), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-9109; E-mail: [lousberg.macara@epa.gov](mailto:lousberg.macara@epa.gov)

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### **Monitoring Workshops for the National Estuary Program**

These 2-day workshops help participants in the National Estuary Program (NEP) prepare or revise their existing Regional Integrated Monitoring Plan, a requirement of each NEP's Comprehensive Conservation and Management Plan. Specific topics include environmental and programmatic indicators, funding issues, quality assurance, key management issues, and data management.

These workshops are sponsored by EPA's Office of Wetlands, Oceans and Watersheds, Oceans and Coastal Protection Division. The workshops are offered in NEP study areas for local, state, and federal monitoring management and staff.

⇒ For more information, contact Joe Hall, USEPA (4504F), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-9082, E-mail: [hall.joe@epa.gov](mailto:hall.joe@epa.gov)

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### **National Environmental Training Center for Small Communities**

The National Environmental Training Center for Small Communities (NETCSC) is a nonprofit organization that helps environmental trainers, assistance providers, and local officials improve the quality of drinking water, wastewater, and solid waste services for small communities. NETCSC offers environmental training curricula for small communities, as well as extensive information on environmental

courses, resources, trainers, training organizations, and training activities across the United States. For example, NETCSC offers curricula on *Managing a Small Drinking Water System: A Short Course for Local Officials*, *Assessing Wastewater Options for Small Communities*, and *Solid Waste Management Options*.

NETCSC training experts provide information through a telephone hotline, publications and other products, the Internet, and presentations around the country. NETCSC's commitment to serve small community environmental needs is accomplished through cooperative partnerships with technical experts, environmental trainers, and other assistance providers accessed through established national, regional, state, and local networks. NETCSC is funded in part by the EPA Office of Water.

⇒ For more information, contact Susan Maczko, NETCSC, P.O. Box 6064, West Virginia University, Morgantown, WV 26506-6064. Toll-free Hotline: (800) 624-8301; Phone: (304) 293-4191; E-mail: [smaczko@wvu.edu](mailto:smaczko@wvu.edu); Internet: [www.netc.wvu.edu](http://www.netc.wvu.edu)

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### **National Estuary Program Finance Workshops**

This 2-day workshop provides diverse, comprehensive, and practical funding solutions for both National Estuary Program (NEP) operating expenses and NEP Comprehensive Conservation Management Plan (CCMP) implementation. The goal is to build the capacity of the NEPs to address long-term funding challenges, such as staff expertise to develop and implement finance plans. The workshops usually include (1) an overview of finance tools and administrative mechanisms, such as grants (public and foundation), debt financing, fines, public-private partnerships, utilities and districts, cost reduction, and tax incentives; (2) case studies that describe funding levels achieved by specific tools, obstacles faced, and how they were overcome, the role of the NEP in developing the finance tool or strategy, and the time and effort required to develop specific finance tools; and (3) breakout sessions or facilitated discussions for participants to share their funding successes and challenges and begin discussing how to apply promising finance options in their programs.

This course is presented by EPA's Office of Wetlands, Oceans and Watersheds, Oceans and Coastal Protection Division. The intended audience is NEP Directors and staff, NEP committee members, and NEP stakeholders. Also encouraged to attend are EPA Headquarters and Regional Coordinators and others at the state or local level (e.g., SRF contacts, NPS Coordinators, local governments, NGOs) that are or will be involved in financing CCMPs.

⇒ For more information, contact Tim Jones, USEPA (4504F), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-6059; E-mail: [jones.tim@epa.gov](mailto:jones.tim@epa.gov)

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### **Nonpoint Education for Municipal Officials Training**

The University of Connecticut Cooperative Extension System offers training through its Nonpoint Education for Municipal Officials (NEMO) Project. NEMO is an educational program that addresses the relationship between land use and natural resource protection, with a focus on water resources. To help create effective presentations, NEMO relies on advanced technologies like geographic information systems, remote sensing, and the Internet. In Connecticut, NEMO offers many different workshops under four main topics: (1) linking land use to water quality, (2) natural resource-based planning, (3) preservation, and (4) development. Most workshops are approximately 1 hour in length and are often followed up by individual consultation and materials to help communities get started on natural resource-based planning. Member projects of the National NEMO Network conduct similar workshops in 19 states and can be contacted through the Connecticut project.

NEMO is funded in part by the EPA Office of Water. The workshops are intended for local land use decision makers such as planning commissions and local government staff.

⇒ For more information, contact John Rozum, NEMO, University of Connecticut Cooperative Extension, 1066 Saybrook Road, Box 70, Haddam, CT 06438-0070; Phone: (860) 345-4511; E-mail: [nemo@canr.uconn.edu](mailto:nemo@canr.uconn.edu); Internet: <http://nemo.uconn.edu> or <http://resac.uconn.edu>

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### **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, presented by EPA's Office of Wastewater Management, is 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 Robin Willison (4203M), USEPA, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 564-5047; E-mail: [willison.robin@epa.gov](mailto:willison.robin@epa.gov)

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### **NPDES Pretreatment Courses**

EPA and the Water Environment Federation offer three pretreatment training courses to ensure that the individuals responsible for implementing the pretreatment program on all levels have the information they need, whether it is just the basics or technical details on specific elements of the program. The 3-day "Comprehensive Pretreatment Course including Industrial User Classification and Permitting" course covers the fundamentals of the National Pretreatment Program and provides basic regulatory framework and technical considerations that support the development and implementation of pretreatment programs under the National Pollutant Discharge Elimination System (NPDES) permit program and the Clean Water Act. It also provides detailed information on how to identify, classify, and permit industrial users. A separate 2-day "Industrial User Classification and Permitting" course is available for people that already have a background in the pretreatment program. A 1-day course, "POTW Control of Oil and Grease," presents an approach that can be used by publicly owned treatment works (POTWs) and sewer utilities to develop and implement their own site-specific programs for preventing or eliminating the entry of oil and grease into sewer systems.

These courses are sponsored by EPA's Water Permits Division and the Water Environment Federation. The comprehensive pretreatment course is intended for environmental professionals responsible for implementing the Pretreatment Program at the local level and for industrial dischargers, consultants, and especially individuals that are new to the program. The other courses are intended for those with pretreatment experience and/or those that have taken the comprehensive pretreatment course.

⇒ For more information contact Patrick Bradley, USEPA (4203M), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 564-0729; E-mail: [bradley.patrick@epa.gov](mailto:bradley.patrick@epa.gov); Internet: [www.wef.org/conferences/workshop\\_semin/](http://www.wef.org/conferences/workshop_semin/)

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### **Participating in the NPDES Permitting Process: A Workshop**

This 2-day workshop presents an overview of the National Pollutant Discharge Elimination System (NPDES) program, along with exercises to help applicants complete a thorough NPDES



application. The course consists of both lectures and exercises analyzing a sample application with supplemental information. Specific information provided by the course includes (1) an overview of the scope and regulatory framework of the NPDES program; (2) the components of a permit and an overview of the permitting process; (3) types of effluent limits and the legal and technical considerations involved in limit development; (4) permit conditions, including special conditions, standard conditions, and monitoring and reporting requirements; (5) permitting considerations, including variances, and other applicable statutes; and (6) the administrative process for issuing and modifying NPDES permits.

The workshop, sponsored by EPA's Office of Wastewater Management and the Water Environment Federation, is intended for permit applicants and permit holders. Public interest groups, environmental consultants and engineers, environmental and municipal attorneys, and regulators not involved in writing permits would also benefit from this course.

⇒ For more information, contact Water Environment Federation, 601 Wythe Street, Alexandria, VA 22314-1994. Phone: (800) 666-0206 or (703) 684-2452; E-mail: [dtobin@wef.org](mailto:dtobin@wef.org) (Dan Tobin) or [nbauer@wef.org](mailto:nbauer@wef.org) (Nancy Bauer); Internet: [www.wef.org/Conferences/Workshop\\_Semin/npdes\\_course.html](http://www.wef.org/Conferences/Workshop_Semin/npdes_course.html)

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### **Smart Growth Leadership Training**

The University of Maryland's National Center for Smart Growth Education and Research focuses on how governments can coordinate to build sustainable communities by managing development in a more environmentally-conscious, cost-effective manner. The Center offers National and Maryland-specific courses on Smart Growth leadership. Both total about two weeks in length, spread over several months. Course sessions address the forces and unintended consequences of government and private sector actions that contribute to sprawl; the core principles of smart growth and their implications for the development, revitalization, and maintenance of vibrant communities; how to identify policy conflicts and find common ground in government programs that affect smart growth; and how to take a leadership role to incorporate smart growth principles in policy and action. In addition to classroom instruction and seminar sessions, an on-line discussion format is available for research and discussion, and for projects dealing with actual development issues under a smart growth framework.

The Center also offers an Applied Pilot Course to help local governments in Maryland and surrounding states work with relevant local, state and federal agencies to develop locally-tailored, collaborative, intergovernmental smart growth action strategies.

These courses, supported by EPA, the State of Maryland, and others, are intended for staff and lead officials of federal, state and local governments and development and special interest organizations, to enable them to lead Smart Growth efforts.

⇒ For more information, contact Kay Bokowy, University of Maryland, School of Public Affairs, 1193 Van Munching Hall, College Park, MD 20742-1821. Phone: (301) 405-6201; E-mail: [kbokowy@wam.umd.edu](mailto:kbokowy@wam.umd.edu); Internet: [www.puaf.umd.edu/OEP/SmartGrowth/default.htm](http://www.puaf.umd.edu/OEP/SmartGrowth/default.htm)

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### **SOS Wetland Conservation and Sustainability Workshop**

This 1- to 2-day workshop teaches participants how to take a proactive role in conserving and restoring our nation's wetlands. The workshop includes presentations by local experts and an introduction to the basic wetland components: vegetation, hydrology, and soils. Participants are exposed to various wetland types, their functions and values, wetland regulations, and stewardship project ideas. The

workshop explains potential human impacts on wetlands and introduces hands-on monitoring techniques such as setting transects, determining plant communities, and sampling wetland soils. All participants receive the newly revised 288-page *Handbook for Wetlands Conservation and Sustainability*, which includes instructions on various wetland monitoring techniques, innovative wetland project ideas, explanation of wetland regulations, information about other wetland conservation programs, and more.

This workshop is taught by the Izaak Walton League of America with funding from EPA's Office of Wetlands, Oceans and Watersheds, Wetlands Division. The workshop is designed for persons from volunteer groups, nonprofit groups, government agencies, and private organizations.

⇒ For more information, contact Casey Williams, Projects Coordinator, Save Our Streams, Izaak Walton League of America, 707 Conservation Lane, Gaithersburg, MD 20878. Phone: (301) 548-0150 ext. 220 or (800) BUG-IWLA; E-mail: cwilliams@iwla.org

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### **SRF 101: Using the SRF to Support Watershed Activities**

This course provides a basic understanding of how the SRF program works and how it can provide funding for an extensive array of water quality related activities to support watershed protection. With assets exceeding \$34 billion, the SRF has become the primary affordable source for communities to finance wastewater treatment projects as well as critical watershed activities, including wetlands protection, agricultural and animal best management practices, estuaries, brownfields remediation, groundwater protection, septic and decentralized systems, and other nonpoint source activities. Participants will learn about the assistance application process, setting state funding priorities, developing creative funding mechanisms to address critical needs, designing innovative ways to solve water quality problems, using the SRF to supplement other available funding sources, and case studies of successful approaches to watershed protection.

This course is sponsored by EPA's Office of Wastewater Management. It is intended for watershed and SRF managers and staff, state and local program managers, EPA regional and headquarters staff, and other interested watershed practitioners.

⇒ For more information, contact USEPA, Office of Wastewater Management, State Revolving Fund Branch (4204M), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 564-0752

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

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

The 10 regional EPA offices periodically provide training on the use of the Clean Water State Revolving Fund (CWSRF) for point and nonpoint watershed protection projects. State and local program managers in the SRF, nonpoint source, estuary, wetlands, ground water, and watershed communities that are interested in participating in these training sessions should contact their EPA regional CWSRF representative:

Region 1 (CT, ME, MA, NH, RI, VT), Ralph Caruso (617) 918-1612

Region 2 (NJ, NY, PR, VI), Bob Gill (212) 637-3884

Region 3 (DE, DC, MD, PA, VA, WV), Maggie Cunningham (215) 814-2883

Region 4 (AL, FL, GA, KY, MS, NC, SC, TN), Connie Chandler (404) 562-9336

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), Nancy Healy (913) 551-7713

Region 8 (CO, MT, ND, SD, UT, WY), Brian Friel (303) 312-6277

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### **STORET**

This 2- to 2½-day course explains how to install, operate, and maintain EPA's modernized STORET (STOrage and REtrieval) environmental data system. STORET is a repository for water quality, biological, habitat, and physical data and is used by state environmental agencies, EPA and other federal agencies, universities, private citizens, and many others. This course also covers accessing STORET data from the STORET Warehouse using a web browser and incorporating the data into commonly used software applications such as spreadsheets. This course is intended for STORET clients and can be customized to meet specific interests and needs.

⇒ For more information, contact STORET User Assistance. Phone: (800) 424-9067;  
E-mail: [STORET@epa.gov](mailto:STORET@epa.gov). Additional information, including a list of EPA regional office STORET coordinators, is available through the STORET web page: [www.epa.gov/storet](http://www.epa.gov/storet)

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### **Stream Corridor and Floodplain Restoration**

This 2-day workshop emphasizes the practical aspects of stream and floodplain restoration and is designed for professionals concerned about flooding, habitat, water quality, and erosion associated with rivers and streams. The workshop focuses on in-the-field application of restoration concepts, and includes classroom instruction covering the principles and concepts of river restoration projects, planning and funding, project design, project construction, and monitoring.

This workshop is conducted by the Association of State Floodplain Managers with support from EPA's Office of Wetlands, Oceans and Watersheds, Wetlands Division. It is designed specifically for practicing professionals looking for a forum to learn about current restoration practices and to discuss their application to specific landscapes and conditions. The course is adapted to the landscape of each host location, but the topics offered are relevant for anyone.

⇒ For more information, contact Diane Watson, Association of Floodplain Managers, 2809 Fish Hatchery Road, Suite 204, Madison, WI 53713. Phone: (608) 274-0123;  
E-mail: [asfpm@floods.org](mailto:asfpm@floods.org); Internet: [www.floods.org](http://www.floods.org)

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

Through lectures, case histories, and field site reconnaissance, this 2- to 5-day workshop provides a comprehensive, overall systems approach to stream stabilization. The course covers 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 address stream hydraulics and sediment transport, stream stability, field investigation equipment and safety, and project monitoring and maintenance. Course participants receive a comprehensive manual containing design criteria and photographs of alternative approaches.

This course is taught by the U.S. Army Corps of Engineers, Engineer Research and Development Center, with funding support from EPA's Office of Wetlands, Oceans and Watersheds, Assessment and Watershed Protection Division. The broad target audience for the course includes persons without a science background, technical specialists seeking 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, MS 39180-6199. Phone: (601) 634-2651;  
E-mail: [derrickd@mail.wes.army.mil](mailto:derrickd@mail.wes.army.mil)

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

Ecosystem Recovery Institute developed this 3-day technology transfer workshop 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, and 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 workshop 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. The workshop is taught by Ecosystem Recovery Institute with funding support from EPA's Office of Wetlands, Oceans and Watersheds, Assessment and Watershed Protection Division, and others. The workshop is designed for conservation districts, state and local resource agencies, tribes, watershed civic groups, and others that are interested in watershed management and need 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. Phone: (717) 235-8426; E-mail: recins@aol.com*

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### **Tribal Nonpoint Source Pollution Workshop**

This 2-day course provides information to tribes about the procedures of the Clean Water Act Section 319 Program (Nonpoint Source Program), explains what is required to become eligible for Section 319 funds, and demonstrates how to prepare Section 319 proposals. Other topics addressed include applying for Treatment as a State status, preparing Nonpoint Source (NPS) Assessment Reports, developing NPS management programs, and preparing watershed plans. Tribes are invited to share their experiences so others might learn from them.

This course is sponsored by EPA's Office of Wetlands, Oceans and Watersheds, Assessment and Watershed Protection Division, and is open to all tribes (including those without federally recognized designation).

⇒ *For more information, contact Ed Drabkowski, USEPA (4503F), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-7009; E-mail: drabkowski.ed@epa.gov*

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### **Volunteer Monitoring for Estuaries**

EPA 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. With the completion of the new *Volunteer Estuary Monitoring Manual*, EPA has added a field validation module to the agenda for the workshops.

The Center for Marine Conservation conducts these workshops, and funding support is provided by EPA's Office of Wetlands, Oceans and Watersheds, Oceans and Coastal Protection Division. The workshops are conducted in coastal areas nationwide, particularly in areas where National Estuary Programs are located. The intended audience includes volunteer monitoring coordinators that manage a group of volunteers in monitoring estuarine areas and is limited to 50 participants.

⇒ *For more information, contact either Joe Hall, USEPA (4504F), 1200 Pennsylvania*

Avenue, NW, Washington, DC 20460, Phone: (202) 260-9082, E-mail: [ball.joe@epa.gov](mailto:ball.joe@epa.gov);  
or Ron Obrel, Center for Marine Conservation, 1432 North Great Neck Road, Suite 103,  
Virginia Beach, VA 23454, Phone: (757) 496-0920

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### **Water Quality Enhancement Techniques for Reservoirs and Tailwaters**

This 2½-day workshop covers reservoir limnological processes and water quality management opportunities, sampling methodologies and data collection, watershed management and in-reservoir and tailwater engineering technologies, and post-project operations and assessment. Participants acquire classroom knowledge, the workshop manual, and computer codes to aid in assessment and design.

The workshop was developed under a grant from the EPA Office of Water's Nonpoint Source Control Branch. The Environmental Laboratory and the Coastal and Hydraulics Laboratory of the U.S. Army Engineer Research and Development Center, Waterways Experiment Station, conduct the workshop, using an interdisciplinary team of engineers and scientists. The target audience for this course includes Corps of Engineers planners, engineers, hydrologists and project personnel; local and regional EPA officials; federal and state soil conservation agencies; state water pollution control agencies; state and federal fish and wildlife agencies; hydropower producers and power administrators; local lake associations and lake and reservoir managers; and municipal water associations.

⇒ For more information, contact Laurin Yates, U.S. Army Corps of Engineers, Engineer Research and Development Center, Vicksburg, MS 39180-6199. Phone: (601) 634-3792; E-mail: [yatesl@wes.army.mil](mailto:yatesl@wes.army.mil)

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### **Water Quality Standards Academy**

This comprehensive and highly structured basic course introduces participants to all aspects of the water quality standards program, including the interpretation and application of the water quality standards regulation; policies and program guidance; development of water quality criteria (human health, aquatic life, sediment, biological, and nutrient); and all other facets of the program. States and tribes adopt water quality standards as laws or regulations. Water quality standards are the backbone of the watershed protection approach to pollution control.

EPA's Office of Science and Technology sponsors this course, which is a basic introductory course designed for those with fewer than 6 months of experience with the water quality standards program. Others can also benefit from the course, including veterans of the water quality standards program that want a refresher course.

⇒ For more information, contact Micki Treacy, USEPA (4305), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-7301; E-mail: [treacy.micki@epa.gov](mailto:treacy.micki@epa.gov)

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### **Water Quality Standards Academy for Indian Tribes**

This comprehensive and highly structured basic course introduces tribal participants to all aspects of the water quality standards program, including the interpretation and application of the water quality standards regulation; policies and program guidance; development of water quality criteria (human health, aquatic life, sediment, biological, and nutrient); and all other facets of the program. States and tribes adopt water quality standards as laws or regulations. Water quality standards are the backbone of the watershed protection approach to pollution control.

EPA's Office of Science and Technology sponsors this course, which is designed for tribal staff with fewer than 6 months of experience with the water quality standards program. Others can also benefit from the course, including veterans of the water quality standards program that want a refresher course.

⇒ For more information, contact Micki Treacy, USEPA (4305), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Phone: (202) 260-7301; E-mail: [treacy.micki@epa.gov](mailto:treacy.micki@epa.gov)

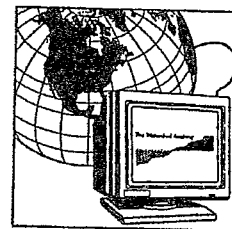
### WET (Whole Effluent Toxicity) Training

The Society of Toxicology and Chemistry (SETAC) offers 4 courses on Whole Effluent Toxicity (WET). WET is defined as the aggregate toxic effect of an effluent measured directly by an aquatic toxicity test. These courses cover water quality topics such as water quality criteria and standards, NPDES permitting and enforcement, WET testing, and quality assurance/quality control (QA/QC), as they apply to the WET program. The courses include (1) WET (Whole Effluent Toxicity) Tale: Toxicity of Complex Effluents, a 2-day course addressing standards, regulations, policy, guidance, and technical aspects of implementing the whole effluent toxicity program; (2) Wild, Wild WET, 1-day course addressing common questions related to the interpretation of toxicity tests; (3) WET Toxicity Identification Evaluations/Toxicity Reduction Evaluations (TI/RE), a ½- to 1-day course discussing concepts of TI/RE for effluents; and (4) Hands-on Course, a 2-day course specifically designed to offer a "hands-on" laboratory experience with freshwater organisms: *Ceriodaphnia dubia*, *Pimephales promelas*, and *Selenastrum capricornutum*. Participants of this course will be exposed to test initiation, monitoring, test termination, and how to analyze data for each of the species mentioned above.

Developed under a cooperative agreement with EPA's Office of Wastewater Management, SETAC's courses are intended for members of any state, tribe, or group seeking a basic understanding of WET or needing to learn more about interpreting WET toxicity tests or conducting TI/RE.

⇒ For more information, contact Greg Schiefer, SETAC Foundation, 1010 North 12th Avenue, Pensacola, FL 32501-3367. Phone: (850) 469-1500; E-mail: [schiefer@setac.org](mailto:schiefer@setac.org); Internet: [www.setac.org/wettrain.htm](http://www.setac.org/wettrain.htm)

## Web-Based Training Opportunities



### Watershed Academy Web-Based Training and Certificate (Watershed Academy Web)

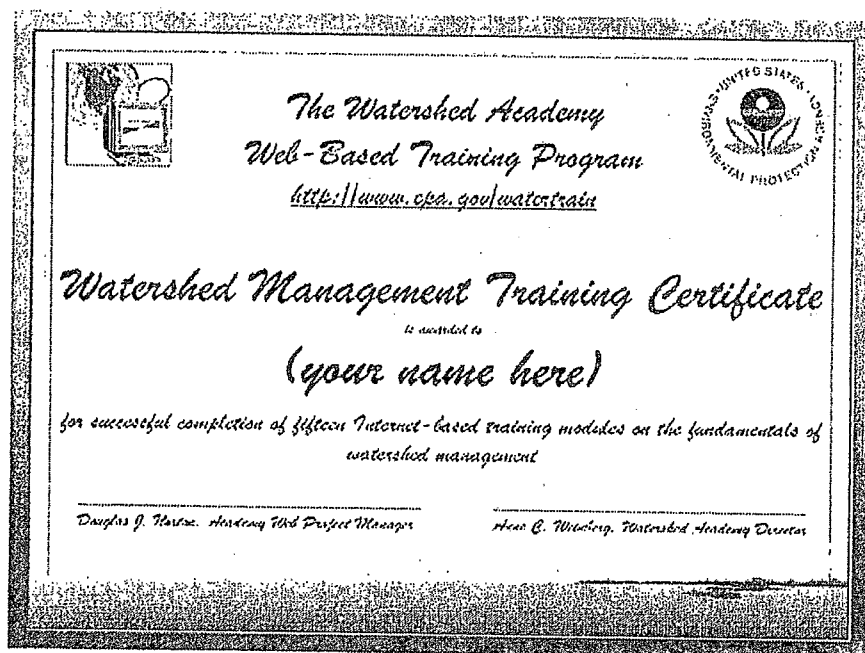
The Watershed Academy's web-based distance learning program, "Watershed Academy Web" ([www.epa.gov/watertrain](http://www.epa.gov/watertrain)), is an educational resource for people that cannot attend live training courses. Watershed Academy Web is a set of self-paced training modules that provide a basic but broad introduction to the many facets of watershed management, organized under the following themes:

- *Introduction/Overview.* These modules introduce the principles of watershed management and the values of working at a watershed level.
- *Watershed Ecology.* These modules describe watersheds as natural systems whose many functions provide substantial benefits to people and the environment.
- *Watershed Change.* These modules describe both natural and human-induced changes in watersheds, contrasting normal variability with changes of concern.
- *Analysis and Planning.* These modules address watershed planning, monitoring and assessment as important steps toward finding solutions to problems.

- *Management Practices.* These modules show how watershed management challenges such as urban runoff, farmland management, forestry and other issues are addressed by techniques that prevent or reduce environmental impacts.
- *Community/Organizational/Social Context.* These modules cover social issues, communications, relevant laws and regulations. They concentrate on the human elements of watershed management.

The goal of Watershed Academy Web is to provide a broad-based introduction to the watershed approach in a format available to anyone who has Internet access. The time and complexity of the modules vary, but most are at the college freshman level of instruction and take 1/2 to 2 hours each to complete. Watershed Academy Web uses a variety of web-based formats, including slide show presentations, interactive exercises, on-line downloadable documents, hot links to related sites, and interactive self-tests.

More than 40 modules are now on-line and more are under development. Students that complete a series of 15 modules and pass their self-tests earn the Watershed Academy Web Watershed Training Certificate. For more information, see the flyer *Watershed Academy Web-Based Training* (EPA 841-F-00-010) available at [www.epa.gov/watertrain](http://www.epa.gov/watertrain).

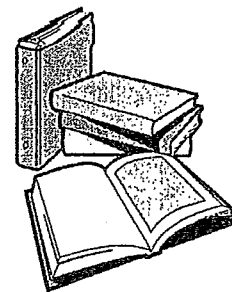


### Drinking Water Academy Electronic Workshop

EPA's Office of Ground Water and Drinking Water offers the "Drinking Water Academy's Electronic Workshop," designed to provide self-paced training modules that give a broad introduction to the many facets of the Safe Drinking Water Act. The training modules in the Electronic Workshop are organized in 4 sections: introductory modules, regulatory modules, technical modules, and other modules. The training materials are currently available in a slide show format as PowerPoint or Adobe Portable Document Format files. Eventually, the Electronic Workshop will include modules with interactive exercises and self-tests. For more information, visit [www.epa.gov/safewater/dwa/electronic.html](http://www.epa.gov/safewater/dwa/electronic.html).

# 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 Service Center for Environmental Publications (NSCEP). Phone: (800) 490-9198 or (513) 489-8190; Fax: (513) 489-8695; Internet: [www.epa.gov/ncepihom/](http://www.epa.gov/ncepihom/). Please include the document name and number when requesting publications. You may also download these publications from the Watershed Academy web site at [www.epa.gov/owow/watershed/wacademy.htm](http://www.epa.gov/owow/watershed/wacademy.htm).

1. ***Watershed Protection: A Project Focus*** (EPA 841-R-95-003) provides a blueprint for designing and implementing local watershed protection programs.
2. ***Watershed Protection: A Statewide Approach*** (EPA 841-R-95-004) provides guidance for reorienting statewide water programs to a watershed approach.
3. ***Monitoring Consortiums: 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.
4. ***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.
5. ***Designing an Information Management System for Watersheds*** (EPA 841-R-97-005) provides an introduction to information management for local watershed managers.
6. ***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.
7. ***Inventory of Watershed Training Courses*** (EPA 841-D-98-001) includes descriptions of EPA and non-EPA courses and dates for the courses.
8. ***Statewide Watershed Management 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.
9. ***Watershed Approach Framework*** (EPA 840-S-96-001) explains EPA's vision for watershed approaches.
10. ***Top 10 Watershed Lessons Learned*** (EPA 840-F-97-001) highlights lessons learned by watershed practitioners implementing the watershed approach.
11. ***Catalog of Federal Funding Sources for Watershed Protection*** (Second Edition) (EPA 841-B-99-003) provides a guide for watershed practitioners on the federal monies that might be available to fund a variety of watershed protection projects. This version of the catalog updates EPA's *Catalog of Federal Funding Sources for Watershed Protection* published in



1997 (EPA 841-B-97-008). The new catalog presents information on 69 federal funding sources (grants and loans) that may be used to fund watershed projects.

12. **EPA Watershed Training Opportunities** (EPA841-B-01-002) describes watershed training opportunities sponsored by EPA's Office of Water and the Watershed Academy. It includes information on training courses, publications, web-based training, watershed management facilitation services, and other educational materials.
13. **Stream Corridor Restoration: Principles, Processes and Practices** (EPA 841-R-98-900), developed by a multi-agency task force, is a reference manual targeted at technical practitioners and others responsible for planning, designing, and implementing stream corridor restoration initiatives.
14. **Remotely Monitoring Water Resources: An EPA/NASA Workshop** (EPA841-B-99-006), details the results of a workshop designed to link watershed and water resources managers with NASA remote sensing experts, to improve awareness of high-tech monitoring tools with which to detect and track water resources management problems and recovery.
15. **Watershed Analysis and Management (WAM) Guide for Tribes** (EPA 841-B-00-008) explains a unique and effective way to assess the environment, identify problems, establish priorities for preservation or restoration, and implement solutions.
16. **Big Darby Creek Case Study: A Profile of Watershed Threats and Protection in a Midwest Landscape** (EPA841-B-00-004) describes the challenges in protecting a high-diversity Ohio stream from urban and agricultural stresses.

## 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. BASINS is available for download at [www.epa.gov/OST/BASINS](http://www.epa.gov/OST/BASINS). The BASINS web site also provides technical support and instructions for ordering BASINS on a CD.

**Software Available for Environmental Awareness:** EPA Region 5 and Purdue University have published at least 44 software programs that provide information on various environmental topics. 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 CD-ROM (from Purdue University) or can be downloaded from the SEAHOME web site. The complete listing of software and the latest information about upcoming releases can be obtained from the SEAHOME web site at [www.epa.gov/seahome](http://www.epa.gov/seahome). For more information, contact Karen Reshkin, USEPA Region 5, 77 West Jackson Blvd., Chicago, IL 60604-3590; Phone: (312) 353-6353; or Carol Sikler, Farm Building Plan Service, Purdue University, 1146 ABE Building, Room 208, West Lafayette, IN 47907-1146. Phone: (765) 494-1174; Fax: (765) 494-1356; E-mail: [fbps@ecn.purdue.edu](mailto:fbps@ecn.purdue.edu).

**Environmental Statute Review Course:** EPA offers a computer-based training course (e.g., a CD-ROM) that uses animation, video, narration, and graphics to cover the general provisions of seven major environmental statutes, including RCRA, EPCRA, CAA, CWA, CERCLA, TSCA, and FIFRA. Each module contains interactive exercises and quizzes. The course is available free of charge.

from EPA's National Enforcement Training Institute ([www.epa.gov/oeca/eti.html](http://www.epa.gov/oeca/eti.html)) for federal, state, local, and tribal environmental enforcement personnel, including attorneys, inspectors, technical staff, and investigators. For more information, contact Ellen Epstein at (202) 564-6042 or e-mail [epstein.ellen@epa.gov](mailto:epstein.ellen@epa.gov). The CD-ROM (NTIS Order Number: PB2001-500036) is also available for \$69 from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. Phone: (800) 553-NTIS (6847) or (703) 605-6000; Fax: (703) 605-6900; E-mail: [orders@ntis.fedworld.gov](mailto:orders@ntis.fedworld.gov); Internet: [www.ntis.gov/](http://www.ntis.gov/).

## Videos

EPA has developed a series of videos on various subjects related to water quality standards and criteria and watershed protection. The video titles and a short description of each appear below, followed by ordering information.

*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.

*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.

*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.

*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. It focuses on the use of indicator species criteria to develop numeric site-specific criteria.

*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.

*Enumeration Methods for Escheria coli and Enterococci* (EPA 823-V-86-001) explains how to sample for bacteria.

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

*Managing River Flows for Biodiversity: Balancing Human Demands and Ecosystem Needs* (EPA 841-V-00-001), developed by the Nature Conservancy, teaches water managers and conservation practitioners how to meet the ecological health needs of rivers. (This video is available from the National Service Center for Environmental Publications at (800) 490-9198 or on-line at [www.epa.gov/ncepihom/](http://www.epa.gov/ncepihom/).)

*The Problem with Shallow Disposal Systems* (EPA 816-V-97-001) explains how chemical waste discharged to ground water through shallow disposal systems (Class V injection wells) can contaminate water resources. It offers simple, preventative steps that a community can take to reduce this threat to its water supply.

*Sampling Ambient and Effluent Waters for Trace Metals* (EPA 821-V-97-001) explains how to sample for trace metals.

*TMDLs and Water Quality Standards* (EPA-823-V-99-001) presents information about Total Maximum Daily Loads (TMDLs) and the role TMDLs play in implementing a state's water quality standards. The video also discusses the roles played by states and tribes, EPA, and the public in TMDL development.

*Water Quality-Based Approach to Pollution Control* (EPA 823-V-91-002) provides an overview of the 8 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.

*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 protect the quality of the nation's waters. It discusses the criteria that must be met for a tribe to conduct the water quality standards program on reservation lands, and discusses the conflicts that might arise when an Indian tribe and a state adopt differing water quality standards on a common body of water.

*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 free for loan for a period of 30 days. When ordering, use the EPA order numbers referenced above. Unless otherwise noted, tapes can be ordered on-line at [www.epa.gov/ogwdw/rescenter.html](http://www.epa.gov/ogwdw/rescenter.html). For more information, contact the Office of Water Resource Center (RC-4100), USEPA, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. For more information call (202) 260-7786 or e-mail [center.water-resource@epa.gov](mailto:center.water-resource@epa.gov).

## Facilitation

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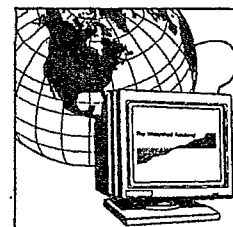
### Technical Assistance for Watershed Approaches

The Watershed Academy offers short-term technical assistance to states, territories, and tribes wishing to move forward with implementation of watershed approaches. Persons with expertise in assisting states and tribes in adopting watershed approaches are available to provide information and advice through face-to-face meetings, e-mail, and other means.

More than 20 states have so far adopted the statewide watershed approach, usually involving implementation of water programs on a rotating basin basis. The exact approach used by states varies significantly from state to state. The experiences of these states offer useful lessons to other states contemplating adoption of the watershed approach. The lessons that states learned when they approached individual programs from a watershed/rotating basin perspective and integrated various water programs can also be useful to states that have already moved some, but not all, of their water programs to this approach, or have already fully integrated those programs on a rotating-basin schedule.

# EPA's Watershed-Related Web Sites

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## Office of Wetlands, Oceans and Watersheds

This site ([www.epa.gov/owow](http://www.epa.gov/owow)) is the heart of EPA's watershed program and a hub for links to EPA programs such as oceans and coastal protection, wetlands, estuaries, monitoring, nonpoint pollution control, and many others.

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## Watershed Information Network

The Watershed Information Network (WIN) ([www.epa.gov/win/](http://www.epa.gov/win/)) is a road map to information and services for protecting and restoring watersheds. WIN provides data on water quality and specific watersheds, as well as information on how to network with others, what resources are available, how to start a watershed group, the condition of watersheds, and who is at work there.

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## Watershed Academy

The Watershed Academy's site ([www.epa.gov/owow/watershed/wacademy.htm](http://www.epa.gov/owow/watershed/wacademy.htm)) parallels the Academy's four key activities—live training courses, web-based training, publications, and watershed management facilitation—and contains frequently updated program and schedule information.

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## Watershed Academy Web

This distance learning site (formerly *Academy 2000*) at [www.epa.gov/watertrain](http://www.epa.gov/watertrain) enables any PC with Internet access to become a watershed training classroom—on any schedule, at no cost. This multi-disciplinary training and certificate program was designed to cover the most important watershed management topics—those subjects about which watershed managers, local officials, involved citizens, decision makers and others should have some basic knowledge.

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## Surf Your Watershed

This multifaceted EPA web site ([www.epa.gov/surf](http://www.epa.gov/surf)) offers environmental and watershed information. The site's resources include lists of environmental web sites; the Enviromapper for Watersheds, an interactive mapping tool for environmental data; the Index of Watershed Indicators, a compilation of information on the health of aquatic resources; a watershed atlas of important watershed protection and restoration data; information on river and wetlands restoration projects; and information on state and tribal watershed assessments. Users can click on maps to find information about local protection and volunteer opportunities; request a map of their watershed; and locate, use, and share information about their watershed or community.

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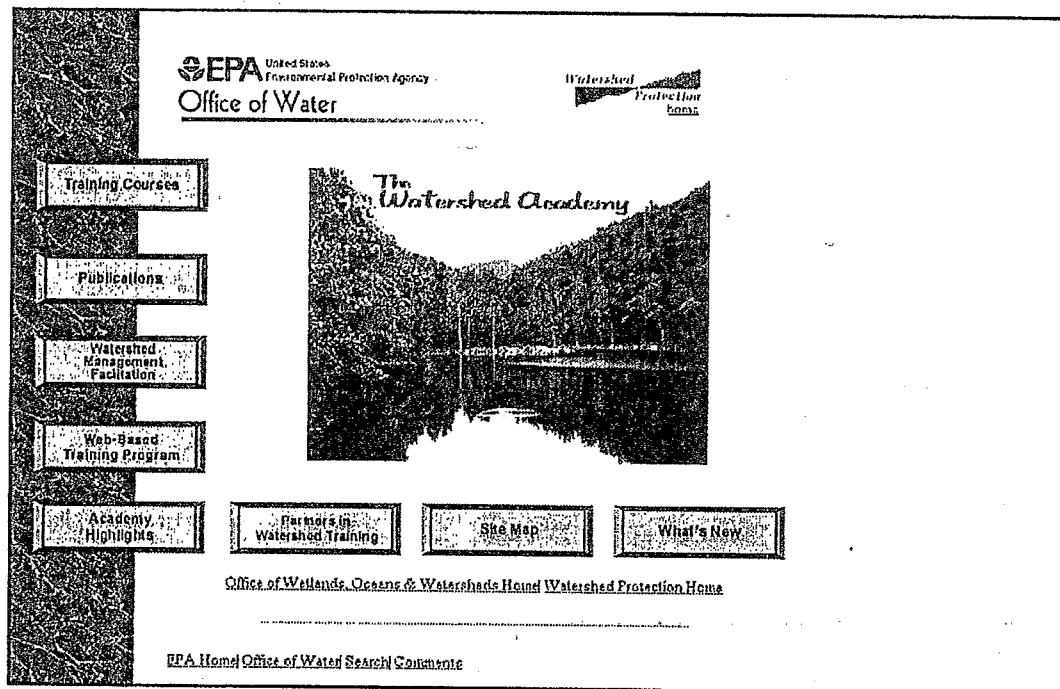
## Office of Water

This site ([www.epa.gov/ow](http://www.epa.gov/ow)) is a gateway to all of EPA Office of Water programs including the Office of Science and Technology, Office of Wastewater Management, Office of Ground Water and Drinking Water, Office of Wetlands, Oceans and Watersheds, and the American Indian Office.

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## Local Drinking Water Information Web Site

This EPA web site ([www.epa.gov/safewater/dwinfo.htm](http://www.epa.gov/safewater/dwinfo.htm)) offers information about drinking water across the country. Web site users can locate information such as state drinking water and source water home pages, Drinking Water State Revolving Loan Fund Intended Use Plans, local drinking water quality reports (Consumer Confidence Reports), water system violations data, and information about ways to protect drinking water sources.



**The Watershed Academy Home Page**  
[www.epa.gov/owow/watershed/wacademy.htm](http://www.epa.gov/owow/watershed/wacademy.htm)



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