
United States
Environmental
Protection
Agency

Region 5, Water Division
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www.epa.gov/r5water/eom



U.S. EPA, REGION 5, WATER DIVISION



WATER EDUCATION & OUTREACH RESOURCE BROCHURE

*--"We see a world that has abundant, safe, and clean water
resources to sustain all living things -- now and in the future." --
Vision Statement*

ENVIRONMENTAL EDUCATION MISSION

“To advance and support education efforts to develop an environmentally conscious and responsible public, and to inspire in all individuals a sense of personal responsibility for the care of the environment.”

In support of the Agency’s Environmental Education mission, this brochure highlights key Education and Outreach resources available from the Water Division of U.S. EPA’s Regional Office in Chicago, Illinois--Region 5, covering the midwest States of Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin.

Our goal is to get you the information, assistance, and tools you need to understand water quality issues and the contribution water programs make to protect public health and the environment, how these impact you and what you can do to help conserve and protect our valuable water resources. We also want to help teachers, parents, and other organizations educate youth on various water topics and promote the pursuit of environmental careers. Visit the Education and Outreach Management Team at www.epa.gov/r5water/eom.

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☆Interactive Models ☆

Enviroscape Non-Point Source Model:

The Non-Point Source Enviroscape model, developed by JT&A, inc., is a powerful, hands-on, interactive tool designed to demonstrate how what we do on land affects water quality. The model is three-dimensional in design and molded from plastic to simulate a watershed landscape. It is approximately 25"x30"x5" and comes packed in a sturdy case with wheels to facilitate transport.

The model features residential, recreational, agricultural, industrial, transport, and land development areas, where various pollution causing activities can occur. The accompanying kit contains everything you need, including miniature vehicles, houses, plants, factories, cars, cows, trees and more, to demonstrate and spark discussions about the water quality issues and concerns



that a typical community can face. Participants learn by applying chemicals (various colors of drink mix), and loose soil or sediment (cocoa) throughout these areas in the watershed community. Rain, using a spray bottle, helps to illustrate how these pollutants can move throughout the watershed. You can also demonstrate how pollution can be prevented, and how it can be cleaned up by using felt vegetation swatches, clay berms, and miniature fences around pollution sources.

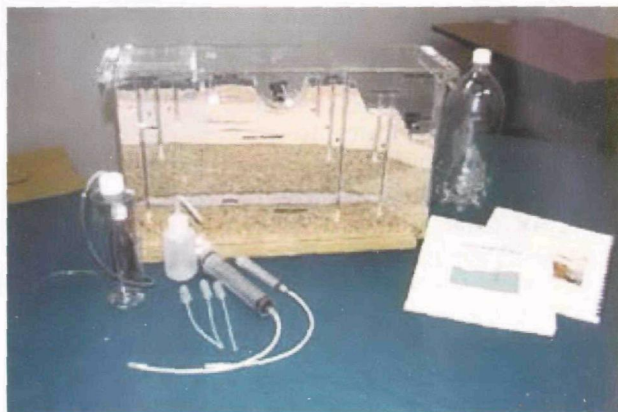
The model has been successfully used with students from Kindergarten through 12th grade as well as universities, soil and water conservation districts, city governments, utility companies, and civic and environmental groups around the county. We have

two models available "on loan" which can be shipped to you along with a user's manual and a script for elementary school classrooms. We also offer a 3-hour training program at our Region 5 Office. To reserve a model or inquire about training, contact Ernie Lopez at lopez.ernesto.epa.gov, (312) 886-3017 or LaYvette Collymore at (312) 353-4416, collymore.layvette@epa.gov

For more information on how to order your very own model, you may contact JT&A at (703) 519-2180 or visit their website at www.envirosapes.com/. You may also order from the Terrene Institute through their products catalog. Write Erin Foster, 4 Herbert St., Alexandria, VA 22305 or visit their website at www.terrene.org/envirosc.htm for a free catalog.

Ground Water Flow Model:

The groundwater flow model, developed by The Western Group, L.C., is a self-contained hydrogeologic system, an excellent tool for teaching basic ground water concepts. It is a cross-section of the earth contained in a clear, acrylic plastic model measuring 20"x6"x12" that comes complete and ready to use in a specially-designed, stable, case for storage and transport. This model easily and clearly illustrates the role of groundwater in the hydrologic cycle and the interrelationships between groundwater and surface water.



The model also enables audiences to understand and visualize in color, the nature, behavior, and contamination of groundwater, an otherwise invisible and often unimaginable natural resource. Different color dyes injected into the various, common routes to groundwater show patterns that help illustrate these principles. Pumping water

wells and injection wells show how ground water contaminant plumes can move throughout a drinking water system, for example.

The front compartment of the model functions as the surface and underground portions of a drainage basin from recharge to discharge areas and features a stream, a lake, wells (water or injection), a flowing artesian well, an underground storage tank, a septic tank system, artesian and water table sand aquifers, and a clay aquitard. The rear compartment is a reservoir which allows the model to operate continuously by recycling water with an electric aquarium pump, or to operate manually using a plastic water bottle. This model has been used by teachers, scientists, groundwater consultants, well drillers, environmental advocates and other professionals at a number of different events, workshops, and training sessions. Contact Kristina Bell at (312) 886-7489 or bell.kristina@epa.gov for more information.

To order a model for your education and outreach program, contact The Western Group, L.C. at (616) 665-4691 or order through the Groundwater Education in Michigan (G.E.M.) Center at Western Michigan University website, www.wmich.edu/geology/gem/visuals.htm.

☆Software ☆

Desdemona's Splash! CD-ROM Game:

Desdemona's Splash is an interactive PC game about water quality and the environment. Users learn how common, day-to-day activities result in pollution and what to do to help prevent pollution and protect water resources. Desdemona the Dragon Fly takes you through three different places within a watershed community--a Farm, a Neighborhood, and a City. Users click on those activities in each scene that they think affect water quality and



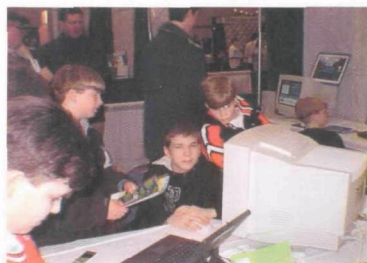
Desdemona will show how chosen activities relate to the water quality of the lake.

We have a limited supply of software copies available. We also have staff available to demonstrate the software at your school, organization, or event, as budget resources and Agency priorities allow. Contact Richard Zdanowicz at (312) 886-1502 or zdanowicz.richard@epa.gov for more information.

You may also purchase a copy of the software in CD-ROM through the Conservation Technology Information Center (CTIC) for \$12 for the first copy, and \$7 for each additional copy. Call (765) 494-5969 or E-mail: ctic@ctic.purdue.edu. A tour and demo of the game is available on line at U.S. EPA's Home Page at:

www.epa.gov/OWOW/NPS/kids/splash/webpage2/

U.S. EPA Region 5 Software for Environmental Awareness:



U.S. EPA Region 5 Software Development Section, in partnership with Purdue University, has developed over 50 titles of interactive software on a wide range of environmental topics, aimed at a wide range of audiences and audience levels. Spanish versions are available for some. Content listings are posted at

www.epa.gov/seahome/cdrom.html.

Water related titles include:

Chemical Contamination in Fish
Ground Water Primer
Wellhead Protection
Private Water Systems
UIC Class V Wells
Surface Water Education System
Efficient Landscape Planner

Electronic Wetlands Herbarium
Wetlands Education System
Environmental Assessment Case Study
Environmental Assessment Resource Guide
Mercury in Medical Facilities
Residential Water Conservation Techniques

For free software and the most up-to-date information, visit the U.S. EPA SEAHOME Website which features downloadable

versions of all our current software programs. The files are in compressed form and can be uncompressed using PKUNZIP version 2.04g. The URL is: **www.epa.gov/seahome**.

For software on CD-ROM, available at cost from Purdue University, contact the Farm Building Plan Service, Purdue University, 1146 ABE Building, West Lafayette, Indiana 47907-1146. By phone call (765) 494-1173; via fax (765) 494-1356; E-mail: fbps@ecn.purdue.edu.

If you still have questions, comments, or need additional information, please contact Karen Reshkin at reshkin.karen@epa.gov or (312) 353-6353

Lake Michigan Explorer:

The Lake Michigan Explorer is an interactive software available on CD which uses video clips of experts combined with text and



graphics to stimulate a question and answer dialogue about Lake Michigan. Discussion focuses on the overall health of Lake Michigan and the role everyone plays in the causes and sources of pollution in the lake. Organizations, such as libraries, schools, museums, and visitors' centers, that can provide the computer hardware and are willing to make

the software available to the public, may request a copy of the CD. The software was developed in partnership with the Chicago Academy of Sciences, Northwestern University's Institute for the Learning Sciences (ILS), and the U.S. EPA. For more information, please contact Rita Garner at (312) 886-2440, garner.rita@epa.gov, or Judy Beck at (312) 353-3849, beck.judy@epa.gov.

Lake Superior Explorer

The Lake Superior Explorer is an interactive software available on CD, which makes use of video clip interviews of experts, combined with text and graphics to stimulate a question and answer dialogue about Lake Superior. The discussions focus on the ecosystem, the lake and its inhabitants, resources, human impacts and facts & figures. The CD will be featured in schools, teacher workshops, and kiosks at museums, libraries, aquariums and nature centers. The computer hardware and software will be provided for the public by these organizations. The software is being developed in partnership with Northwestern University's Institute for the Learning Sciences (ILS) and the U.S. EPA. For more information about the CD's release, please contact Kristina Bell (312)886-7489, bell.kristina@epa.gov or Janice Carrollo (312)353-6416, carrollo.janice@epa.gov.

☆Videos ☆

Community Based Environmental Protection Videos

U.S. EPA's, Region 5 Water Division and Office of Public Affairs, and the Great Lakes National Program Office developed these videos which highlight community based environmental protection. These videos were designed to stimulate ideas, provide a sense of progress and practical ways for target audiences to increase environmental awareness, form new partnerships, and take action in their communities.



“Great Lakes Teens, Stewards of Today, Partners for Tomorrow”, is about teenagers demonstrating leadership and taking actions in their communities. The video tells five stories, one in each of the Great Lakes

watersheds, about teens who are taking action now to help address critical environmental issues around the Great Lakes for the future. The stories include: promoting sustainable development throughout the Lake Superior basin; restoring natural habitat in the Lake Michigan basin; dealing with exotic species in the Bay City, Michigan area; addressing non-point source problems in the Rouge River watershed; and reducing toxics in Rochester, New York. (Running Time - 45 minutes)

“Northwest Indiana: Partnerships for Change”, looks at new ways of doing business in Northwest Indiana. The video: examines innovative household hazardous waste program put in place by three counties; visits the Indiana Dunes National Lakeshore showing progress made to restore the dunes natural habitat; stops by Wolf Lake to see how a shoreline erosion problem is solved; and, talks about how an artificial wetland is reducing non-point source pollution from the tollway. Finally, the video addresses the cooperative efforts of State and Federal agencies and businesses to stop oil leakage into the Grand Calumet River. (Running Time - 18 minutes)



These video's are available on loan through the Water Division Education & Outreach Resource Room which is featured in this brochure.

Other Videos

We have videos available on a variety of different water subjects. See the Water Division Education and Outreach Resource Room Section for more information and to obtain a list of videos.



Here are a few highlights!

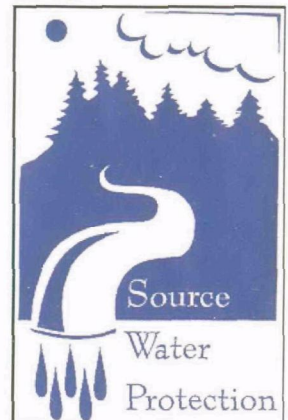
"The Problem With Shallow Disposal Systems" - Alerts local communities to shallow disposal systems, an often overlooked pollution source. It only takes one such system to pollute an entire drinking water supply and threaten the economic health of a community. Video helps to identify and solve the problem. (Running Time - 15 minutes)

"Water the Life Giver" - Mille Lacs Band of Ojibwe describes their way of life and efforts to protect their water resources. (Running Time - 30 minutes)

"Troubled Waters" - Produced by Linda Gerber Productions under IEPA/U.S. EPA funding, "Troubled Waters" discusses the dangers and risks associated with the disposal of automotive waste fluids into such avenues as floor drains that lead to shallow disposal systems which then discharge underground, thus, potentially threatening to contaminate the ground water below. While the video was designed to educate operators about the impact of their day-to-day practices on the environment, it may also serve as an educational tool for the general public. The video provides

pollution prevention tips for the automotive industry, informs oil & gas consumers, and discusses U.S. EPA laws and injection well program which regulates these practices. (Running Time - 19 minutes)

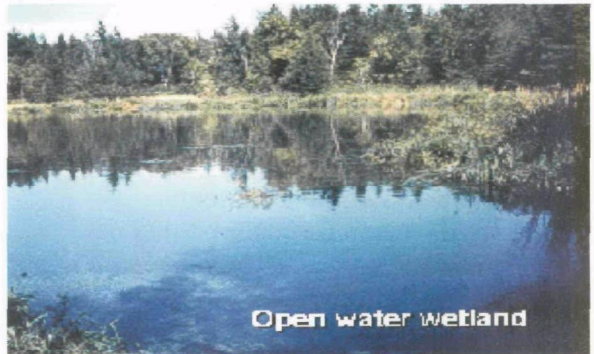
"Protecting Your Ground Water Supply: Putting the Pieces Together" - Communities discuss their experience in developing local wellhead protection programs. Through interviews with community leaders and



excerpts from a Regional conference, the video highlights the lessons learned in delineating wellhead protection areas, conducting potential source inventories, managing potential sources to reduce the risks to the water supply, and educating the public. (Running Time - 27 minutes)

"Between Sky and Shore ... A Closer Look at Wisconsin's Wetlands" - Discusses wetlands and their importance to every living thing. A product of the Wisconsin Coastal Management Program - Wisconsin Department of Natural Resources. (Running Time: 26 minutes)

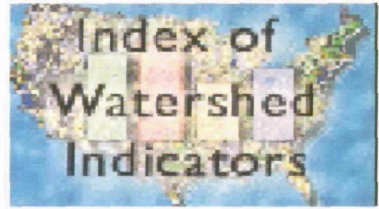
"A World in Our Backyard... A Wetlands Education and Stewardship Program" - Shows how three different teachers from different towns inculcate learning by doing. Also featured on the tape is *"Fabulous Wetlands"* which describes wetlands through the eyes of a very humorous narrator. Product of the New England Interstate Water Pollution Control Commission; funding provided by U.S. EPA, Region 1 in Boston, Massachusetts. (Running Time: 23 Minutes)



"Building Partnerships Over Land & Water... The Mackinaw River Project" - Shows how a watershed management plan was organized by forming a team and working with the community. Produced by Impact Video Productions and funded by The Nature Conservancy and IEPA under grant from U.S. EPA. (Running Time: 24 minutes)



"Be A Part of the Solution To The Saginaw Bay Watershed... A Citizen's Guide For Improving Water Quality" - Shows what you can do to protect your watershed. Produced by Michigan State University and funded by the Saginaw Bay National Watershed through a grant from the U.S. EPA. (Running Time: 13 minutes)



☆Internet ☆

Internet Resources:

Visit U.S. EPA's *Office Of Water Kids* page for a variety of information on water topics at www.epa.gov/ow/kids.html. Check out some science fun for kids in the water environment; take a cyberwalk through the kids art gallery; learn more about marine debris; and access several drinking water activities.



Surf Your Watershed

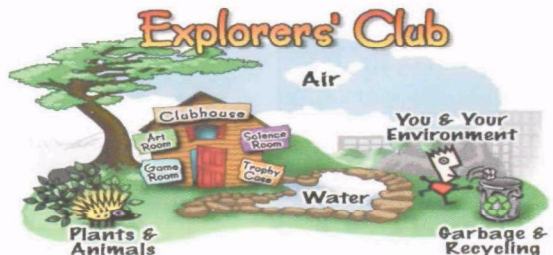
A Service to Help You Locate, Use, and Share Environmental Information about Your Place.



The U.S. EPA's *Surf Your Watershed* website at www.epa.gov/surf/ gives you information you can use and share with others about the

watershed in which you live. You can also learn about adopting a watershed by visiting www.epa.gov/surf/adopt

Visit U.S. EPA's *Office of Water Non-Point Source Kids* page at www.epa.gov/OWOW/NPS/kids/. Become an



aquatic crusader; learn about water critters; do a non-point source word search; and, find out what's wrong with a non-point source picture.

Visit *U.S. EPA's Explorer's Club* kids page on water at **www.epa.gov/kids/water.htm**. Learn about water, water, everywhere; explore different water ecosystems and learn about the plants and animals that make water their home.

Visit the *U.S. EPA Region 5's Joint, 25th Anniversary Home Page for the Clean Water Act and the Great Lakes Water Quality Agreement* at **www.epa.gov/25water/**. These two historic legislative milestones began 25 years of unprecedented environmental restoration and protection efforts. Learn about the some of the fish, flowers, beaches, ecological



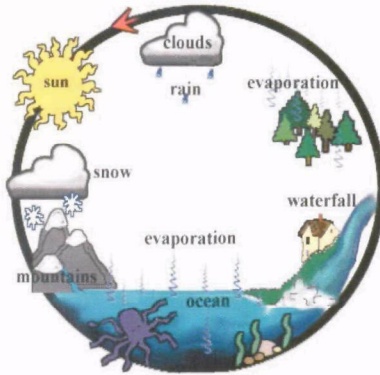
communities and other Great Lakes resources that have been threatened by erosion, exotic species, toxic chemicals and various other pollutants. See some of the solutions brought about under these legislative milestones. Also includes an on-line version of *The Great Lakes: an Environmental Atlas and Resource Book* and a Great Lakes Images Collection.

Visit *U.S. EPA Region 5 Water Division's Electronic Compendium of Groundwater Protection Ordinances* at

www.epa.gov/r5water/ordcom/. More than 200 cities, towns, tribal nations, reservations, and territories protect groundwater public drinking water systems from contamination by using a variety of local government tools such as zoning, health regulations, subdivision controls, and transfer of development rights. The ordinances, regulations, and by-laws implementing these tools range from regulating individual sewage disposal systems, placing limitations on the use of toxic and hazardous materials, pesticides, salts, and limiting nitrogen loading within wellhead protection areas, to prohibiting certain uses such as landfills, and underground fuel storage tanks within wellhead protection areas. Users may use a web browser for an "All-in-State" ordinance text search to find documents of interest within a

given state. The electronic compendium also offers individual ordinances by State available in downloadable .PDF file format.

☆ *Water Related Education & Outreach Materials* ☆



Water Division Education and Outreach Resource Room:

The Water Division Education and Outreach Resource Room, is the Division's central point for storage and distribution of water related education and outreach materials. There's tons of information to choose from on various topics, including wastewater, wellhead and source water protection, ground water, drinking water,

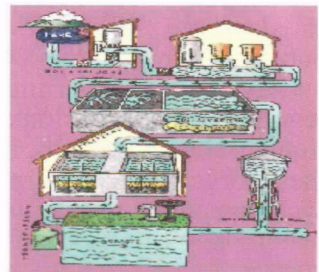
injection wells, non-point source pollution, Lake Erie, Lake Superior, Lake Michigan, watersheds, wetlands. We have videos, brochures, activity sheets, curriculum, fact sheets, and more. For more information on how to order these resources or to obtain a list of available materials, contact:

Richard Zdanowicz, (312) 886-1502, Program Manager
 Valoria Robinson, (312) 886-4281, Inventory Manager
 Willa Winston, (312) 886-6682, Room Manager
 E-mail: [enter last name].[enter first name]@epa.gov

☆ *Speakers* ☆

Speakers Bureau:

The Agency receives calls from many organizations looking for speakers to address a variety of topics. Requests range from schools looking for science fair judges, to civic organizations wanting speakers for their monthly meetings, to trade groups

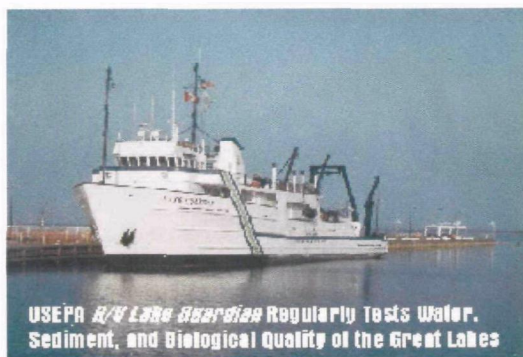


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looking for somebody to explain new regulations. If you or your organization is interested in having a U.S. EPA employee address an environmental topic, contact the agency's hotline at (800) 621-8431 for more information.

☆ *Overall U.S. EPA, Region 5 Environmental Education Program* ☆

For more information on the U.S. EPA Region 5's overall environmental education program, check out **www.epa.gov/region5/enved** or contact the agency's hotline at (800) 621-8431.



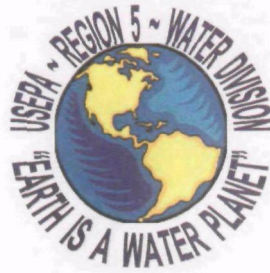
Resources Include:

Environmental Education Grants Program
U.S. EPA Region 5 Library - (Resource List Available)
Videos
Audiotapes
Posters
Curriculum guides
Speaker's Bureau

And More!



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This resource brochure is developed and distributed by the U.S. EPA Region 5 Water Division, Education & Outreach Management Team. Visit us at our website at **www.epa.gov/r5water/eom**.