



WE ALL LIVE DOWNSTREAM



Poster created by:

Rima Rajan, Grade 1, Age 6, Loesche School, Philadelphia, PA

Introduction for the Teacher

We hope you enjoyed participating in this year's EPA Region 3 Women in Science and Engineering (WISE) Poem and Poster Contest, which takes place every year across the Delaware Valley. We also hope that both you and your students will continue to participate in future years. To that end, we want to provide you with this roadmap for obtaining additional support and teaching materials to follow-up on this year's contest theme: "We All Live Downstream." This publication was also written for those teachers who have not yet participated in the contest but who are interested in enhancing their curricula with nonpoint source concepts.

It is the hope of both WISE and the EPA Region 3 Nonpoint Source Program that, in reading this publication, you will be convinced that nonpoint source pollution (more commonly referred to as "polluted runoff") is a worth-while concept to include in your curricula. As you can imagine, nonpoint source pollution is an issue of importance for Americans from all walks of life, in urban areas as well as in the country. Nonpoint source pollution is an issue that is easy to learn and fun to teach -- and will undoubtedly touch the lives of students in every age group.

As you read this publication, we would like to invite you to consider the applicability of nonpoint source concepts to aspects of your science, history and creative writing curricula.

For example, nonpoint source pollution can be applied to a lesson in math, biology, chemistry and geology. It is evident from the posters submitted this year that there are also many social studies issues inherent in problems caused by nonpoint source pollution, and in the actions required by individuals and communities to solve these problems. There are also numerous opportunities for students of all ages to write about this problem through creative essays or by researching problems in their watershed. An American History or politics class can use nonpoint source concepts as a way to debate regulatory versus voluntary approaches to water quality improvement.

This publication was produced by the EPA Region 3 Nonpoint Source Program for the benefit of teachers in the Delaware Valley and throughout the Region, which covers the mid-Atlantic states including Pennsylvania, Delaware, Maryland, Virginia, West Virginia and the District of Columbia. We believe, in these areas, the first and most important step toward water quality improvement is education. In order for this publication to be as effective as it should be, we will depend on teachers to provide this critical first step. Only in this way can "We All Live Downstream" sincerely work toward our mutual goal of water quality improvement and environmental protection.

Thank you.

We All Live Downstream

Quick. Name the source of the most water pollution in the United States. You said industry. Right? Wrong.

Nonpoint source (NPS) pollution is the nation's No. 1 threat to water quality. Nonpoint source pollution occurs when runoff from precipitation carries pollutants over and through the ground and deposits them into waterways, sickening or killing fish and plants and threatening drinking water supplies. One example of nonpoint source pollution is runoff from farms, carrying fertilizers and pesticides into streams. Another example is motor oil leaking onto the highway. Yet another example is a person pouring cleaning chemicals down the drain. As you can see, the name is derived from the concept that there is no single point from which the pollution comes. It comes from everyone and everywhere.

Nonpoint source pollution is a slippery problem. Since its sources are hard to pinpoint, so are its solutions. So far, the best way to combat the problem has been through education. This is where you, the teacher, enters the picture. This publication will help you understand what constitutes nonpoint source pollution, what causes it, and how we can stop it. Also provided is a list of publications and contact names which you can use to supplement curricula with nonpoint source concepts and examples. We hope you will use this as a tool to teach and to learn about nonpoint source pollution.

What Happens When It Rains?

When it rains, water falls as rain or as snow onto the ground. At this point, this water begins to "runoff" by flowing over the land as surface water or by accumulating under the land as ground water. If you have ever stood near a storm drain on the road during or just after a rainstorm, you've probably seen the water "runoff."

But, have you ever wondered where the water goes after it enters a storm drain? We can begin answering this question by learning the definition of a "watershed."



A watershed is an easy concept to understand. In its essence, it is a geographical boundary just like any city or state. The only difference between a watershed and the other examples listed above is that the borders of a watershed are defined by nature.

Think of a funnel with a lot of people in it. Then imagine how the actions of each person in the funnel contribute to water pollution in a typical day -- from small business owners and private citizens to major corporations and the government. All of these activities occur within the confines of a single funnel -- or watershed.

What is at the bottom of this funnel? The same thing that is at the bottom of your street -- a storm drain! Water flows down your street, picking up pollution from various activities on its way, and eventually empties into the storm drain -- every time it rains. From there, the now polluted water makes its way through pipes under the ground until it finally discharges into a stream.

On a larger scale, water will flow down through a watershed, picking up various sources of pollution on its way, and empty into a larger waterbody -- a lake, river or ocean. Just as with the storm drain example, the whole process of polluted runoff entering a waterbody will happen again and again in the very same watershed as a consequence of the same people and the same activities, every single time it rains. The pollution source is continuous.

We All Live In A Watershed

It's true. In fact, we can think of the United States as two gigantic watersheds -- one draining to the Atlantic Ocean and one draining to the Pacific Ocean!

To control nonpoint source pollution effectively, though, each of us must look to our own local watersheds -- neighborhood streets and local streams.

A large watershed is made up of many smaller ones, just as a large river is fed by many small tributaries. If you live and go to school in Northeast Philadelphia, you are in the Delaware River's watershed. More specifically, though, a waterbody that drains into the Delaware River is the Pennypack Creek. It is much easier to control and prevent the nonpoint sources in the Pennypack Creek than it is in the Delaware River. By the same token, it is easier to address the problem in the Delaware River than it is to address the overall problem in the Atlantic Ocean, with a much larger watershed.

Zeroing in on small, local watersheds is the key to overall protection. At the end of this publication, you will learn about information resources which can make it easy for you to identify the watershed you live in and get your classroom involved.

Where To Point For Nonpoint Sources?



So far, we have described the movement of nonpoint source pollution through watersheds. Now it is time to look more specifically at those moving sources and how they collectively create a very serious threat to water quality. Three sources of nonpoint pollution are described below: urban pollution, agricultural pollution, and mine drainage from abandoned coal mines.

1. Urban Pollution

Pollutants carried by runoff from streets, commercial and industrial sites, residential developments, parking lots, septic systems and human activities in an urban environment affect water quality in a number of different ways. Urban pollution represents a major threat to the Delaware and Schuylkill Rivers. Here are some examples of urban nonpoint source pollutants:

- ▶ Nutrients. The most problematic nutrients associated with city pollution are nitrogen and phosphorus. Major sources of nutrients are lawn and garden fertilizers, leaking septic systems, animal wastes from pets, street debris and lawn litter. Nutrients cause low oxygen levels in water, especially in lakes. Naturally occurring microorganisms in the lake will use available oxygen to break down these organic materials. This activity will decrease the level of oxygen available to the other organisms in the lake. Fish and plants that live in the lake may suffer or die as a consequence. This condition is known as a "fish kill."
- ▶ Sediments. High sediment concentration in water is associated with disturbed or unstable soil conditions. Construction activities that involve moving large areas of soil are a major contributor of sediments in water. Small land grading and

landscaping projects, streambank erosion, and road sanding can also contribute to sediment loading. Sediment can "clog" a stream which reduces fish hatcheries and aquatic life. Sediment can also clog fish gills and reduce light penetration to the stream.

- ▶ Bacteria. Leaking septic systems can add bacteria to surface water and ground water. Although usually harmless to humans, bacteria is used as an indicator of other disease-causing viruses, commonly referred to as pathogens.
- ▶ Hydrocarbons. Nonpoint source pollution from petroleum-based hydrocarbons is commonly associated with leaking crankcase oils and other automotive lubricants and products of partial combustion of fossil fuels. These materials can be seen on the top of paved surfaces as a rainbow sheen. Illegal disposal of motor oil into a storm drain system can also contaminate streams and other tributaries. Low concentrations of hydrocarbons have been known to be toxic to aquatic organisms. Hydrocarbons may also accumulate in the tissue of edible species representing a threat to human health.

II. Agricultural Pollution

Agricultural activities and practices can pose a significant threat to water quality. Some examples of agricultural pollutants are sediments from eroded croplands and overgrazed pastures, fertilizers, animal wastes and pesticides.



- ▶ Animal Waste. Manure runoff from livestock is contributing to degradation of waters throughout the United States. An analysis of data indicates that feedlots alone nationally contribute to 13 percent of degradation in rivers.
- ▶ Soil Erosion. Soil erosion is the movement of topsoil (and other soil components) after intensive exposure to wind and water. Soil erosion from agricultural activities results from improper irrigation practices, stream channel modification, streambank vegetation loss, and poor livestock management. Soil erosion is potentially hazardous to aquatic life and human life.
- ▶ Fertilizers and Pesticides. Fertilizers and pesticides contaminate ground water by seeping down from the surface into the ground water. It is important to know that when a well is drilled for drinking water, it not only becomes a path for water to come up, but also for pollution to go down.

III. Coal Mines

As Americans, we enjoy one of the highest standards of living in the world, due largely to the availability of inexpensive sources of power. It has been estimated that 56 percent of our nation's electric power is generated by coal. Runoff from coal mining activity is a significant nonpoint source pollutant.

Coal contains naturally occurring amounts of iron sulfide, which is called pyrite. When the pyrite comes into contact with oxygen in the water, the oxygen reacts with the pyrite to form sulfuric acid, which is very acidic. If ground water runs through the coal mine, it will flush this acid runoff to the water table.

Acid mine drainage can cause the pH (the acidity) of water to fall into an acidic range of 1 to 5. (For contrast, the pH of a healthy stream ranges between 5.5 and 7.5) Each stream has a natural ability to buffer or neutralize acid mine drainage, but as mining increases in a watershed, the abundance of acid will overwhelm a stream's natural buffering capability.

The impacts associated with low pH are devastating to the environment. Once pH drops below 4, everything living in the stream dies, including plants, fish, bugs, larvae, most bacteria and eggs. All biological resources are lost.

Environmental impacts of acid mine drainage are not limited to the stream ecosystem itself. A dead stream will also cause a decline in the wildlife that rely on the stream for food and habitat.

Tackling the problem of acid mine drainage is even more difficult than agricultural or urban problems. This is because most of the coal mines creating the problem are abandoned or inactive. This is nonpoint source pollution at its worst -- a major water quality problem that cannot be traced to a single stream or a single owner in a watershed. Nor can the source itself be identified because it is sometimes difficult or impossible to locate the abandoned mines.

In EPA Region 3 there are approximately 6,000 stream miles impacted by abandoned mine drainage, specifically in western Pennsylvania and nearby West Virginia, and to a lesser extent, in Virginia and in Maryland.

Nonpoint Source Pollution Solutions

The following are two examples of Federal grant programs which support projects that reduce nonpoint source pollution and educate about watershed protection. A teacher can use these Federal programs, as well as state and local programs, as an opportunity to get students more involved with a current nonpoint source project. Please use the contact sheet at the end of this publication if you are interested in receiving information about grant opportunities at the Federal, state or local level.

1. Clean Water Act Section 319: A Nonpoint Source Pollution Control Program

Section 319 was enacted in 1987 with the reauthorization of the Clean Water Act. Each state in the nation was charged with assessing nonpoint source problems and then adopting strategies to combat the problems. The state was also given the important task of implementing the new nonpoint source management strategies.

Since fiscal year 1990, Congress has provided \$270 million to the nation in Section 319 funds. These funds are divided up among the states to provide technical and financial support for watershed projects, demonstrations, restoration projects, water quality monitoring projects, information/education initiatives or ground water projects associated with nonpoint source

pollution reduction and prevention. The overriding criteria to receive a Section 319 grant is that the proposal has potential to achieve short-term, measurable environmental results in priority nonpoint source watersheds, designated by each state.

Teachers can get more information about an ongoing Section 319 project in their watershed by contacting the state agencies and local watershed groups listed at the end of this publication.

II. Environmental Education Grants

The Environmental Education Grant program was established in 1990 by Section 6 of the National Environmental Education Act. Grants are awarded annually to stimulate environmental education by supporting projects that design, demonstrate or disseminate practices, methods, or techniques related to environmental education or training. While individual teachers and educators cannot directly apply for funding, education agencies and organizations they are affiliated with are eligible to receive a grant under this program.

Environmental education grants can provide teachers with the opportunity to communicate with local organizations and government in order to contribute to an education project in their watershed. For more info about this program, contact the EPA Environmental Education Grant Program at (215) 597-9076.

Steps You Can Take

- Prevent erosion by planting trees, shrubs, and good ideas in your community
- Recycle used motor oil
- Clean up after your pets
- Don't dump garbage in a storm drain
- Buy environmentally friendly products
- Make sure your septic system is working properly
- Contact your local watershed association and volunteer your time there
- Contact your local conservation district office for more information
- Start your own watershed association if one does not exist in your watershed
- Tell your county and state representatives about nonpoint source pollution prevention
- Educate by telling your family and friends how they can reduce nonpoint sources
- Get involved! This is the best way to get informed
- Apply for a grant to reduce and prevent nonpoint source pollution in your watershed
- Keep in contact with schools and non-profit organizations for updates

"Do unto others downstream as you would have those upstream do unto you." -

Rockwood Foster, Interstate Commission on the Potomac River Basin

Natural and Information Resources -- Let's Keep Them Both Abundant

Nonpoint source pollution concepts are easy to learn and fun to teach. Please use the following list of local, regional and national publications, handbooks and curricula to enhance your classroom learning process. Costs for each publication is included where possible.

Adopt-A-Stream Teacher's Handbook -- 241 pages for grades 7-12, includes chapters on how to adopt a waterway, field safety, sampling site selection, physical parameters, water chemistry, aquatic biology, microbiology, and evaluating results. Order from Delta Laboratories, Inc., P.O. Box 435, Pittsfield, New York, 14534, (716) 392-6450, (1987). \$65. Includes a teachers handbook and ten student manuals. Will send a condensed version of the handbook free of charge.

Aquatic Project Wild -- 240-page teacher guide for grades K-12, chapters include awareness and appreciation, diversity and values, ecological principles, management and conservation, culture and wildlife, issues and consequences, and responsible human actions. Order from Western Regional Environmental Education Council, P.O. Box 18060, Boulder, Colorado 80308-8060.

Be Water Wise -- 45-page student booklet and 32-page teacher guide for ages 12 and up, topics include the importance of water, water in the environment, getting water to and from our homes, the relationship between water and energy, and water conservation in our homes. Order from Virginia Water Resources Center, Virginia Polytechnic Institute and State University, 617 N. Main Street, Blacksburg, Virginia 24060-3397, (703)231-5624, (1983).

A Citizen's Guide to Plastics in the Ocean; More than a Litter Problem -- 143-page book with facts and information. Called the "bible" of marine debris information. Reviews history of legislation and outlines government agencies and nonprofits that have worked on marine debris. How plastic affects wildlife. Center for Marine Conservation, 1725 Desales Street, Washington, DC 20036. (202) 429-5609. Will send two copies free of charge. If you order more than two copies, they charge \$2 per copy.

The Class Project -- 133 page activity guide for junior high and high school, chapters include energy use, environmental issues, forest/watershed management, wetlands, wildlife habitat, you can make it happen and digging deeper. Published by the National Wildlife Federation in 1982 and no longer in print. Available through some school libraries and through inter-library loans. Check with your local libraries for availability.

Educating Young People About Water: A Guide to Goals and Resources -- 49 pages for grades 4-12, contains information on designing water quality training programs and curricula. Order from University of Wisconsin-Madison, Environmental Resources Center, 216 Agriculture Hall, 1450 Linden drive, Madison, WI 53706.

Environmental Resource Guide -- Nonpoint Source Pollution Prevention -- a series of curricula developed by the Tennessee Valley Authority and the Air and Waste Management Association, consists of activities, fact sheets, glossaries, references, and resources that focus on land use and water quality, and in particular, nonpoint source pollution. Order from Air and Waste Management Association, P.O.Box 2861, Pittsburgh, Pennsylvania 15230, (412) 232-3444. Fact sheets broken by grade level and costs between \$30 - \$40 for each fact sheet. Some fact sheets are free of charge.

Investigating Streams and Rivers -- 10-activity curriculum promoting an interdisciplinary approach to understanding local watersheds, includes suggestions for enhancing student involvement through using computer conferences. Order from The GREEN Project, School of Natural Resources, University of Michigan, 430 east University, Ann Arbor, Michigan 48109-1115, (313) 761-8142, (1992). \$14.95. Also, ask for their free catalogue which inventories other video tapes, problem solving materials and workshop presentation tools.

Living in Water -- 319 pages for grades 4-6, supplementary science curriculum which uses hands-on science experiments and activities to teach students about the physical and biological characteristics of marine and freshwater habitats. Order from the Education Department, National Aquarium in Baltimore, Pier 3, 501 E. Pratt Street, Baltimore, Maryland 21202-3194, (1989).

Local Watershed Problem Studies -- 2-unit supplementary activity for Elementary School, Middle School and High School. Activity focus on the interrelationships between land use and water quality. Order from University of Wisconsin Water Resources Center, 1975 Willow Drive, Madison, Wisconsin 53707, (1992). (608) 262-3577. Cost is \$7.75 for elementary school guide and \$16.65 for high school guide.

Project Learning Tree -- 2-unit supplementary activity guides for grades pre-K-8 and 9-12, activities arranged in the thematic units of diversity, interrelationships, systems, structure and scale, patterns and change. Order from the American Forest Council, 1250 Connecticut Avenue, N.W., Suite 320, Washington, DC 20036. (202) 463-2468. You can receive these guides if you participate in a one-day workshop in the state you teach in. Teachers should call the Project Learning Tree main office to find out the name of your state coordinator at (202) 463-2462.

Project WET: Water Education for Teachers --
supplementary activity guide for grades K-12, contains
multi-disciplinary activities related to a variety of water
issues and the role of water in people's lives. Order
from Montana Water Resources Research Institute, 201
Gaines Hall, Montana State University, Bozeman,
Montana 59717, (406) 994-5392.

Hands On Save Our Streams (SOS) 1995 -- for grades
1-12, curriculum includes instructions for involving your
class or club in a community-based environmental
learning project. Can be used to teach social studies,
biology, chemistry, math. Order from Save Our Streams
Program, Izaak Walton league of America, 707
Conservation Lane, Gaithersburg, Maryland 20878,
(1995.) (800) BUG-IWLA. \$15. Orders of 10 or more
copies receive a 10% discount. Members of the IWLA
also receive a 10% discount for single copies.

Chesapeake Bay Series: Simple Ways to Save the Bay --
Soil Conservation; All Recycling; Septic Systems; Water
Conservation; Your Boat And The Bay; and Household
Hazardous Waste; -- a series of pamphlets and
booklets which outline what can be done to reduce
nonpoint sources of pollution in the Chesapeake Bay and
its watersheds. Order from Chesapeake Bay Foundation,
164 Conduit Street, Annapolis, Maryland 21401. (410)
268-8833. Free of charge.

Saving Water -- The Conservation Unit -- video, 20 student resource guides, and one teacher's resource guide for grades 5-9, discusses the importance of conserving water and explains how to conserve water; teacher's guide includes activities and answers to questions about water conservation. Order from Water Environment Federation, 601 Wythe Street, Alexandria, Virginia 22314-1994. (800) 666-0206. \$49.

The Stream Scene: Watersheds, Wildlife and People -- 300-page notebook, contains activities about watersheds, water quality, and aquatic organisms. Order from Oregon Department of Fish and Wildlife, Office of Public Affairs, P.O. Box 59, Portland, Oregon 97207. (503) 229-5400, ext. 433, (1992.) \$15. Can only accept checks for payment.

Surface Water -- 30-page student resource guide for grades 5-9, teacher's resource guide, and VHS video, topics include the water cycle, surface water, water quality testing, water pollution, and wastewater treatment. Order from Water Environment Federation, 601 Wythe Street, Alexandria, Virginia 22314-1994. (800) 666-0206.

Tapwater Tour -- for grades 4-8, hands-on science curriculum and water test kit. Five units help students discover what is in their own tapwater. Order from LaMotte Company, P.O. Box 329, Chestertown, Maryland 21620, (800) 344-3100, (1989). \$44.

U.S. Fish and Wildlife Service Resource Guide --
Variety of publications available on water pollution. U.S.
Fish and Wildlife Service, Chesapeake Bay Estuary
Program, 177 Admiral Cochrane Drive, Annapolis,
Maryland 21401. (410) 573-4583.

Volunteer Estuary Monitoring: A Methods Manual --
focus of this manual is the identification of those water
quality parameters that are most important in
determining an estuary's water quality. Manual focuses
on the concepts and plans developed by the EPA guide
and places them in a nuts-and-bolts context specifically
for volunteer estuary monitoring programs. For a copy,
write to U.S. Environmental Protection Agency, Office of
Water, Office of Wetlands, Oceans and Watersheds, 401
M Street, SW (4504F), Washington, DC 20460. Free of
charge.

Get Your Classroom Involved!

Here are contact names, addresses and telephone numbers for people and programs at the local, state and federal level in EPA Region 3. These people can help get you and your classes involved with a water quality improvement project in your watershed.

Pennsylvania:

Nicki Kasi, Nonpoint Source Program Manager
Bureau of Land and Water Conservation DER
P.O. Box 8555
Harrisburg, PA 17105-8555
(717) 712-5629

Kristin Travers and Jim McGonigle
Stroud Water Research Center
Academy of Natural Sciences
Science Programs for Junior High/High School Students
"Watershed Workshops for Teachers"
512 Spencer Road
Avondale, PA 19311
(610) 268-2153

Pennsylvania Association of Conservation Districts
225 Pine Street
Harrisburg, PA 17101
(717) 236-6410

Delaware:

Nancy Goggin, Nonpoint Source Program Manager
Division of Soil and Water Conservation
Dept. Of Natural Resources & Environmental Control
89 Kings Highway P.O. Box 1401
Dover, Delaware 19903
(302) 739-3451

Linda Stapleford
Delaware Stream Watch Program
Delaware Nature Society
P.O. Box 700
Hockessin, Delaware 19707
(302) 239-2334

Delaware Association of Conservation Districts
P.O. Box 242
Dover, DE 19903
(302) 739-4411

Maryland:

Susan Claus, Nonpoint Source Program Manager
Chesapeake Bay and Watershed Management
Administration
Maryland Department of the Environment
2500 Broening Highway, Building 30
Baltimore, MD 21224
(410) 631-3584

Glenn Page
Watershed Restoration Program
Alliance for the Chesapeake Bay
6600 York Road Suite 100
Baltimore, Maryland 21212
(410) 371-6270

Jacquelyn Galke
Maryland Save Our Streams (SOS)
"Be A Part of Something Big" Program
258 Scotts Manor Drive
Glenn Burnie, Maryland 21061
(410) 969-0084 or (800) 448-5826

Maryland Association of Conservation Districts
53 Slama Road
Edgewater Maryland 21037
(410) 956-5771

District of Columbia:

Hamid Karimi, Nonpoint Source Program Manager
Environmental Regulation Administration
Department of Consumer and Regulatory Affairs
2100 Martin Luther King, Jr. Ave, SW
Washington, DC 20020-5732
(202) 645-6601 ext. 3038

Jim Shell

Anacostia Restoration Project

Rapid Stream Assessment and Inventory Project

Metropolitan Washington Council of Government

777 North Capital Street Suite 300

Washington, DC 20002-4226

(202) 962-3342

Stuart Schwartz and David Velinsky

Information Sharing on the Potomac River Basin

Interstate Commission on the Potomac River Basin

6110 Executive Boulevard Suite 300

Rockville, Maryland 20852

(301) 984-1908

Soil and Water Conservation District

2100 Martin Luther King, Jr. Ave., SE

Suite 203

Washington, DC 20020

(202) 645-6617

Virginia:

Stuart Wilson, Nonpoint Source Program Manager

Division of Soil and Water Conservation

Dept. of Conservation and Historic Resources

203 Governor Street, Suite 106

Richmond, VA 23219-2094

(804) 786-4382

Gary Boring
Adopt-A-Watershed Program
Middle Fork Holston River Water Quality Committee
110 West Spiller Street
Wytheville, Virginia 24382
(703) 228-2879

Kris Dennen
Stream Monitoring Program and Watershed Model
Demonstrations
North Fork Goose Creek Committee
30-H Catoclin Circle, SE
Leesburg, Virginia 22075
(703) 771-8395

Wayne Davis
Watershed Model Demonstrations for Teachers and
Students
Piankatank River Watershed Project
Division of Soil and Water Conservation
P.O. Box 1425
Tappahannock, Virginia 22560
(804) 443-6752

Virginia Association of Conservation Districts
203 Governor Street
Suite 206
Richmond, Virginia 23219
(804) 786-5312

West Virginia:

Lyle Bennett

Nonpoint Source Program Lead

Office of Water Resources

Department of Environmental Protection

1201 Greenbrier Street

Charleston, WV 25311

(304) 558-2108

Alvan Gale

Outdoor Classrooms for Elementary Schools

Hands-On Stream and Pond Ecology

Division of Environmental Protection

Office of Water Resources

1201 Greenbrier Street

Charleston, WV 25311

(304) 558-2108

WV Soil Conservation Committee

State Capital

Guthrie Center

Charleston, WV 25305

(304) 558-2204

Federal:

Hank Zygmunt

EPA Region 3

Nonpoint Source Program Coordinator

841 Chestnut Building

Philadelphia, PA 19107

(215) 597-3429

Barbara Spinweber

EPA Region 2 (includes New Jersey)

Nonpoint Source Program Coordinator

290 Broadway 25th Floor

New York, New York 10007

(212) 637-3100



Get To Know The PEEC!

The EPA Region 3 Public Environmental Education Center (PEEC), located in the lobby of the Region 3 office in Philadelphia, offers the public unprecedented access to information about the Region 3 mid-Atlantic states and the environment through use of exhibits, touch-screen television monitors, videos, films, literature, electronic data systems and street-level displays. The PEEC also has an environmental career work station and personal computers which allow the public limited access to EPA data through electronic bulletin boards. If travel permits, the PEEC invites you to bring your classroom to EPA. Students of all ages can come to hear lectures on their favorite environmental issues by the EPA experts. The PEEC is handicap accessible and meets the Americans with Disabilities Act requirements. If you would like to explore all that the PEEC has to offer you and your students, please write or call:

Public Environmental Education Center (PEEC)
EPA Region 3 Office -- Lobby
841 Chestnut Building
Philadelphia, PA 19107
(215) 597-PEEC

Special Thanks

Thank you to the EPA Region 3 Water Management Division, the Massachusetts Hen Cove Nonpoint Source Pollution Mitigation Project and the WISE Poem and Poster Contest. Also, a special thanks to the following individuals: Teena Reichgott, Danielle Algazi, Bill Foster, Ruth Podems (thank you thank you thank you), Fred Suffian, Joe Malick, Li Howard, Carol Ann Gross, Joe Piotrowski and Hank Zygmunt.

If you have questions about the EPA Region 3 WISE Poem and Poster Contest, please contact Carol Ann Gross at (215) 597-9047.

If you have questions about this publication or if you would like more information about watershed protection programs in your state, please contact Sarah Boonin in the EPA Region 3 Nonpoint Source Program at (215) 597-9911.

We All Live Downstream

Everybody lives downstream,
Don't you understand?
The waste we throw in waters
Goes to every land.
If you put trash on the
street
Everytime it rains,
The trash you put on the
road
Will go into the drains.
Fertilizers, pesticides, moth
balls, hair sprays, too,
Fall into the ocean to make
things bad for you.
If you don't use any of
these
The world will be just
fine.
It will be good for your
health,
And will take care of mine.
So stop Nonpoint Source
Pollution
Though it may not seem,
For everyone who lives and
dies
We all live downstream.

Poem written by:

Allison Horowitz, Grade 5, Age 11, Woodcrest Elementary, Cherry Hill, NJ
Mego Lien, Grade 5, Age 10, Woodcrest Elementary, Cherry Hill, NJ