NONPOINT SOURCE POLLUTION PUBLICATIONS AND PROJECTS

Produced by the Alliance for the Chesapeake Bay

In cooperation with the Pennsylvania Department of Environmental Protection Nonpoint Source Program with funding from U.S. Environmental Protection Agency, Region 3, Section 319 Nonpoint Source Implementation Grant Program. Websites with Nonpoint Source Pollution Information



Pennsylvania Department of Environmental Protection

http://www.dep.state.pa.us (choose information
by subject/water management)

Pennsylvania Department of Conservation and Natural Resources

http://www.dcnr.state.pa.us

Alliance for the Chesapeake Bay http://web.gmu.edu/bios/Bay/acb/index.htm

Center for Watershed Protection http://www.pipeline.com/~mrrunoff

Chesapeake Bay Program http://www.epa.gov/r3chespk

U.S. Environmental Protection Agency, Nonpoint Source Information Exchange http://www.epa.gov

Conservation Technology Information Center http://www.ctic@ctic.purdue.edu

Penn State Environmental Resources Research Institute http://www.erri.psu.edu



INTRODUCTION

Nonpoint source pollution occurs when contaminants enter waterways from water that has washed across the surface of the land. Unlike point source pollution, which can be traced back to a point discharge such as a pipe, nonpoint pollution sources are not easily pinpointed.

Nonpoint pollution has many different sources, including air pollution and run-off from agriculture, construction, waste disposal, and abandoned mining sites. Nonpoint source pollution can greatly degrade water quality by introducing heavy metals, nutrients, sediments, and other harmful substances to waterways. Citizens, however, can take various actions to help prevent nonpoint source pollution from occurring.

This Resource List of Nonpoint Source Pollution Publications and Materials is funded by a grant from the U.S. Environmental Protection Agency, Federal Clean Water Act Section 319(h). The Nonpoint Source Implementation Program is administered by the PA Department of Environmental Protection Nonpoint Source Program. This list is a compilation of many publications relating to nonpoint source pollution in Pennsylvania. Although the main focus is materials relating to Pennsylvania, it also includes information from other states and from the federal level. This list is broken down into several sections for easy use and contains the sources of the publications and a contact list for further information on nonpoint source pollution.

This list was designed for use by local government officials, educators, environmental groups, and the general public. The goals are to bridge the informational gap of nonpoint source publications, help eliminate the production of duplicate information, and make it easier to identify resources that need to be updated. Most important, the list can be used as a guide for the many people interested in reducing nonpoint source pollution. Please note: (#) indicates where reference can be obtained (see Contacts for Publications Directory at the conclusion of this publication listing)

ARTICLES

- "NPS Pollution Runoff of Rain and Snowmelt Our Biggest Water Quality Problem". <u>EPA Journal</u> November/December 1991, Volume 17, No.5, 53 pp. (1)*. This issue extensively covers the nonpoint pollution issues from the problems to the action one can take around the home.
- Essman, Janet.(1992)"Seep, Drip, Dribble: Nonpoint Source Pollutants Add Up in New York's Waters." New York:State of New York Department of Environmental Conservation, May/ June 1992.(1)* Discusses NPS pollution and various solutions such as vegetation buffer strips and stormwater management practices. Thompson, Paul. "Poison Runoff" The Environmental Forum. Volume 6, August 1989, pp. 5-11. (1)* Provides a guide to the state and local control of NPS water pollution. This article can also be found in book form through the National Resources Defense Conservation in April of 1989.

"Initial Projects of GIS Support Center Focus on Nonpoint Source Pollution and Mine Lands." <u>Penn State University</u> <u>Environmental Resources Research Institute Newsletter.</u> Volume 25, No. 3, Summer 1995. (21)* The article describes the projects that the Center is providing in consulting and planning services to Pennsylvania state agencies in utilizing GIS and remote sensing technologies.

"GIS Targets Nonpoint Source Pollution." Penn State University Environmental Resources Research Institute Newsletter. Volume 24, No. 1, Winter 1994. (21)* GIS is being used to assess contributions of nonpoint source pollution from watersheds and sub-watersheds.

"Projects Target Nonpoint Source Pollution." Penn State University Environmental Resources Research Institute Newsletter. Volume 21, No. 2, Winter 1991. (21)*

"Studies Pinpoint Water Pollution Potential." Penn State University Environmental Resources Research Institute Newsletter. Volume 18, No. 3, Winter 1988. (21)* The article covers research on using remote sensing and computer techniques to pinpoint water pollution potential. Specifically, researchers have developed approaches for evaluating potential surface water and groundwater pollution problems.

Appendix A

Pennsylvania Department of Environmental Protection Regional Offices

Southeast Region (Conshohocken) Regional Water Quality Manager Lee Park, Suite 6010 555 North Lane Conshohocken, PA 19428-2233 (610) 832-6000 (610) 832-6259 (fax)

Northeast Region (Wilkes-Barre) Regional Water Quality Manager 2 Public Square Wilkes-Barre, PA 18711-3296 (717) 826-2511 (717) 830-2488 (fax)

Southcentral Region (Harrisburg) Regional Water Quality Manager One Ararat Blvd., Room 147 PO Box 2357 Harrisburg, PA 17110 (717) 657-4585 (717) 657-4446 (fax)

Northcentral Region (Williamsport) Regional Water Quality Manager 208 W. 3rd Street, Suite 101 Williamsport, PA 17701 (717) 327-3636 (717) 327-3565 (fax)

Southwest Region (Pittsburgh) Regional Water Quality Manager 400 Waterfront Drive Pittsburgh, PA 15222-4745 (412) 442-4000 (412) 442-4194 (fax)

Northwest Region (Meadville) Regional Water Quality Manager 230 Chestnut Street Meadville, PA 16335-3481 (814) 332-6945 (814) 332-6125 (fax)

^{* -} indicates the Alliance for the Chesapeake Bay has a copy of the material.

(26) The Water Monitor AWPD (4503F) U.S. Environmental Protection Agency 401 M. Street, SW Washington, DC 20460 (202) 260-7018 (202) 260-1977 (fax) http://www.epa.gov/owow/watermonitor/

- (27) Wildlands Conservancy 601 Orchid Place Emmaus, PA 18049-1637 (610) 965-4397
- (28) Chesapeake Bay Program Office 410 Severn Ave Annapolis, MD 1-800-968-7229
- (29) Adams County Conservation District
 57 North Fifth Street
 Gettysburg, PA 17325
 (717) 334-0636
 (717) 334-5999 (fax)

OTHER SOURCES

US EPA Region 3 Nonpoint Source Program 841 Chestnut Building Philadelphia, PA 19107 (215) 597-3429

Anglers For Clean Water, Inc. B.A.S.S., Inc. P.O. Box 17900 Montgomery, AL 36141

County Conservation Districts (check in local phone directory)

"A Tale of One City." <u>Wisconsin Natural Resources</u>. Volume 14, No. 4, August 1990. (1)* A community searches for solutions to urban nonpoint pollution.

"Trouble Waters, the Nutrient Threat." <u>Pennsylvania Resources</u>. Volume 2, No.1, Winter 1991. (1)* Over-view of nonpoint nutrient pollution in Pennsylvania.

BOOKS

- EPA. Perspectives on Nonpoint Source Pollution. Washington, D.C.: Terrene Institute, 1994. Report on the conference proceedings held on May 19-22, 1985 in Kansas City, Missouri on Nonpoint Source Pollution.(22)*
- Frey, R., editor. 1996. Commonwealth of Pennsylvania 1996
 Water Quality Assessment [Section 305(b),Federal Clean
 Water Act]. PA-DEP, Bureau of Water Quality Management.
 Provides a summary of information on problems and control
 programs for nonpoint source pollution (pp. 12-26).(5)*

Hansen, N.R., Babcock, H., and Clark, E.1988. Controlling Nonpoint Source Water Pollution: A Citizen's Handbook. Washington, D.C.: The Conservation Foundation. Offers information on nonpoint source pollution problems. It also contains ways in which citizens can become involved through developing a management program.(1)*

Wagner, T. 1994. In Our Backyard: A Guide to Understanding Pollution and Its Effects. Van Nostrand Reinhold Publishers. Excellent source of environmental facts supplied without technical jargon or political agenda. It addresses vital questions on everything from water quality to the cost of toxic controls and cleanups, and consumer decisionmaking. (22)

BOOKLETS

- Riparian Forest Buffers. (27)* Booklet that describes riparian zones and the important role they play as stream buffers. 20 pp).
- Riparian Forest Buffers White Paper.(1)* Provides background, functions and values, and description of a riparian forest buffer. (16 pp).

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BROCHURES AND FACT SHEETS

- Chesapeake Bay: Measuring Pollution Reduction. (23b)* Discusses various facets of nutrient pollution. Publication #FS-055-95)
- Conestoga Headwaters Rural Clean Water Program in PA (5) Eight panel brochure with information on agricultural nonpoint source pollution along with soil and water conservation information.
- Controlling Accelerated Soil Erosion and Preventing Sediment Pollution. 5)* Discusses how sedimentation disrupts ecosystems and how pollution can be controlled.
- The Fate of Pesticides in the Environment and Groundwater Protection. (4)* (Publication #NRAES-34). Describes the way in which pesticides pollute groundwater and the environment along with providing a checklist as to how people can protect their groundwater from pesticide pollution.
- The Forest Buffer: A Living Resource. (27)* Discusses the way in which buffer zones can be used to stop nonpoint source pollution from harming rivers and streams.
- Good Neighbors: Tackling Nonpoint Source Pollution In PA (16)*
 Offers information on how individuals can help stop
 nonpoint source pollution through various techniques.
 Groundwater and Agriculture In Pennsylvania. (1)*
- Publication #U0199). Discusses the ways in which agricultural runoff contributes to nonpoint source pollution and the harm which it brings to groundwater.
- How To Care For Your Streams. (27)* Offers simple solutions to protect your streams from nonpoint source pollution. Manure Management: Choices for PA (5)

A four panel brochure on agricultural NPS pollution including general information for land users.

- National Water Quality Assessment: Nonpoint and Point Sources Of Nitrogen in Major Watersheds Of The United States. (23a)* Provides the U.S. Geological Survey's findings from their assessment of the quality of the nation's water resources. (Publication #20192)
- Nonpoint Pointers.(11) A series of eleven fact sheets on understanding and managing nonpoint source pollution in your community.(Publication #EPA-841F96004B)
- Nonpoint Pollution. Runoff: A Growing Pollution Problem. (12)* Offers general information concerning nonpoint source pollution.

- Brochure showing how everyday activities contributes to nonpoint source pollution and offers suggestions in reducing the pollution from enteringthe local waterways.
- Nonpoint Source Pollution: You Are the Key to the Cleanup. (25) Brochure for the general public that explains how the average person can help to control nonpoint source pollution.
- Polluted 8 page brochure to the public on NPS (7)
- * indicates the Alliance for the Chesapeake Bay has a copy of the material.

- (20) Public Education Program Air & Waste Management Association One Gateway Center, Third Floor Pittsburgh, PA 15222 (412) 232-3444 (412) 232-3450
- (21) Penn State Environmental Resources Research Institute 125 Land and Water Research Building University Park, PA 16802-4900 (814) 863-0291 (telephone) (814) 865-3378 (fax) http://www.erri.psu.edu
- (22) Terrene Catalogue
 PO Box 605
 Herndon, VA 20172-0605
 (703) 548-5473 (questions)
 (703) 548-1582 (place an order)
- (23a) NAWQA Program U.S. Geological Survey Water Resources Division 12201 Sunrise Valley Dr National Center, MS 413 Reston, VA 20192 (703) 648-5716 (703) 648-6693 (fax) http://www.usgs.gov or http://wwwrvares.er.usgs.gov/nawqa/WR194-4001.html email: nawqa_whq@usgs.gov
- (23b) Chesapeake Bay Program Coordinator U.S. Geological Survey 208 Carroll Bldg. 8600 LaSalle Road Towson, MD 21286 (410) 512-4900 http://water.usgs.gov/public/wid/html/chesbay.html/
- (24) Smithsonian Environmental Research Center Edgewater, MD 21037-0028

Nonpoint Source Pollution (13)

- (11) National Center for Environmental Publications and Information PO Box 42419 Cincinnati, OH 45242-2419 (800) 490-9198 (513) 489-8695 (fax)
- (12) National Wildlife Federation
 1412 Sixteenth Street, NW
 Washington, D.C. 20036
 (202) 797-6800
- (13) New Jersey Dept of Environmental Protection
 Office of Environmental Planning
 CN 418
 Trenton, NJ 08265-0423
 (609) 633-1179
- (14) Publications Director NCSU Water Quality Group Campus Box 7637 Raleigh, NC 27695-7637 (919) 515-3723 (919) 515-7448 (fax) email: wq_puborder@ncsu.edu
- (15) Ohio Federation of Soil & Water Building E-2, Fountain Square Columbus, OH 43224
- (16) Pennsylvania Association of Conservation Districts 225 Pine Street Harrisburg, PA 17101 (717) 236-1006
- (17) Penn State Cooperative Extension 1100 Claremont Road Carlisle, PA 17013 (717) 240-6500
- (18) Pennsylvania Cooperative Fish and Wildlife Research Unit Merkle Building University Park, PA 16802
- (19) PennDOT Task Force on Dirt and Gravel Roads 1009 Transportation & Safety Bldg Harrisburg, PA 17120 Attn.: Wayne Kober (717) 787-1024 (717) 772-0834 (fax)

Rural Clean Water Program (RCWP). (14) A series of 10 technical sheets designed to share the lessons learned from the RWCP about nonpoint source pollution control projects with water quality and other natural resource professionals. Each fact sheet includes examples from RCWP projects to illustrate key points. (Publication #WQ-89) Rural Nonpoint Source Management (22)

Overview of individual topics to serve as a basis for decision making. Information includes wetlands, watersheds, and rural roads.

- Save Our Streams: A Guide For Streamside Property Owners. (27)* Offers suggestions on what can be done to reduce nonpoint source pollution in streams.
- Sewage Sludge Agricultural Use. (5) Defines sewage sludge and the discusses the benefits of agricultural uses.
- Sewage Sludge and Septage Management in Pennsylvania. (5) An overview of how sewage sludge and septage are managed in Pennsylvania.
- Stormwater Management in Pennsylvania. (5)* Provides a sketch of stormwater history in Pennsylvania, management, and suggestions for resolving problems.
- Stormwater Management Grants and Reimbursements (5)
- Task Force on Dirt and Gravel Roads.(19) Information on the task force that was created to address the environmental impacts of dirt and gravel roads in the Commonwealth of Pennsylvania.
- You Can Help Control Sediment Pollution. (27)* Offers various means to control sediment pollution.
- Urban Nonpoint Source/Stormwater Management (22)

A series of briefing sheets for decisionmakers covering a wide range oftopics on urban water quality management practices.

CHILDREN

Amazing Soil Stories: Adventure and Activity Book (10) 18 page comic book and activity manual appropriate for elementary school ages. It addresses NPS pollution in general.

Environmental Resource Guide-Nonpoint Source Pollution
Prevention (20)* The resource guides are hands-on
environmental curricula for students in grades K-12.
The guides use both classroom and outdoor activities to
stimulate learning.

Sammy Soil Saver Puppet Kit (10)

Three ring notebook containing scripts, puppets, etc. on soil conservation and nonpoint source pollution in general. Save Our Wetlands (22)

A poster containing advice from the Ninja Turtles on how to conserve wetlands.

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MAGAZINES

- Land and Water. (8)* Offers various articles on natural resource management and restoration, including the problems associated with nonpoint source pollution.
- Watershed Protection Techniques. (3)* Quarterly bulletin focusing on urban watershed restoration and protection tools.

GUIDES AND MANUALS

- Controlling Erosion and Sedimentation Checklist Guide (5) Erosion and Sedimentation Program Manual (5)
- Erosion and Sedimentation Pollution Control Plan Checklist -Guide (5)
- Recommended Hydrologic Procedures for Computing Urban Runoff from Small Watersheds in PA - Manual (5)
- Manure Management For Environmental Protection PA (5) Supplements:
 - Beef Manure Management (5)
 - Dairy Manure Management (5)
 - Field Application of Manure Management (5)
 - Horse, Sheep, Goat, and Small Animal Manure Management (5)
 - Poultry Manure Management For Environmental
 - Protection (5)
 - Swine Manure Management (5)
 - Veal Calf Manure Management (5)
- Chesapeake Bay Riparian Handbook: A Guide for Establishing and Maintaining Riparian Forest Buffers (1)*
- Pennsylvania Water Resources Directory: A compilation of Chesapeake Bay watershed and other water related educational information (16)

NEWSLETTERS

- Bay Journal Free Newsletter (1)* This newsletter is a public education service of the Chesapeake Bay Program and offers various articles on NPS pollution.
- Keystone in the Cleanup Free Newsletter (16)
 A newsletter that informs youth about statewide water
 quality and nonpoint source pollution issues.
- Know Your Watershed Free Newsletter (4)* This newsletter is written for watershed partnerships with information from watershed partnerships. Includes funding tools, technical resources, In Search Of/In Response To columns, calender and more.
- Nonpoint Source News Notes Free Newsletter (22) This newsletter, part of the NPS Information Exchange, provides useful information about NPS pollution.
- The Water Monitor Free Newsletter (26) A bimonthly publication that gives an update on the EPA's state and regional water quality monitoring activities.

Contacts for Publications

- (1) Alliance For the Chesapeake Bay
 225 Pine Street
 Harrisburg, PA 17101
 (717)236-8825
- (2) Bullfrog Films, Inc. PO Box 149 Oley, PA 19547 (215) 779-8226
- (3) Center for Watershed Protection 8737 Colesville Road, Ste 300 Silver Spring, MD 20910 (301) 589-1890
- (4) Conservation Technology Information Center 1220 Potter Drive, Room 170 West Lafeyette, IN 47906-1383 (317) 494-9555 http://www.ctic@ctic.purdue.edu
- (5) Department of Environmental Protection Regional Offices (Appendix A) or in the local phone directory under state government. http://www.dep.state.pa.us
- (6) Department of Environmental Protection Bureau of Watershed Conservation
 PO Box 8555 Harrisburg, PA 17105-8555
- (7) U.S. Environmental Protection Agency Nonpoint Source Information Exchange 401 M Street, S.W. (WH-553) Washington, DC 20460 (202) 260-3665 http://www.epa.gov
- (8) Land and Water Magazine PO Box 1197 Fort Dodge, IA 50501-9925
- (9) Maryland Cooperative Extension Service Wye Research and Education Center PO Box 169 Queenstown, MD 21658 (410) 827-8056
- (10) National Association of Conservation Districts
 PO Box 855
 League City, TX 77574-0855
 (713) 332-3402

Active Projects Summary (21)

A directory of the Pennsylvania State University, EnvironmentalResources Research Institute, active projects based on fiscal year.

Nonpoint Source Pollution Prevention Catalog (16) Featuring mini-projects funded by the PA Department of Environmental Protection through the PA Chesapeake Bay Program and EPA Section 319 Program divisions.

Nonpoint Source Education Projects Summary (6) Listing of Nonpoint Sources projects funded by the Pennsylvania Department of Environmental Protection through the EPA Section 319 (h) Program. POSTERS

Pollution Begins and Ends With You (22) Rural Water Quality - It's Worth Protecting (22) Urban Water Quality: Sound Management Makes It Happen (22) Rural Water Quality: Sound Management Makes It Happen (22) Watershed Management: Stop Pollution At Its Source (22) You Make the Difference (22)

REPORTS

Commonwealth of Pennsylvania "Quantification of NPS Pollution Loads within Pennsylvania Watersheds." 1997. (5) A report that assesses the contributions to water pollution in Pennsylvania from 1) on-lot sewage systems, 2) agricultural runoff, 3) non-agricultural fertilizers, 4) storm water runoff, and 5) atmospheric deposition. Available late 1997.

Coastal Environmental Services, Inc. "A Plan to Reduce the Lawn Fertilizer-Related Nutrient Load Entering Harveys Lake." April 1996. (1)* A report on the plan to minimize the lawn fertilizer-related nutrient load entering the lake.

- Commonwealth of Pennsylvania. "Chesapeake Bay Nutrient Reduction Strategy."Pennsylvania Department of Environmental Protection. January 1996. (5)* This strategy lays out a plan to reduce nutrients which reach the Chesapeake Bay from the Susquehanna and Potomac Rivers and other tributary streams.
- Commonwealth of Pennsylvania. "Nonpoint Source State Management Program." Pennsylvania Department of Environmental Resources. 1992.(5)* This program is required under Section 319(b) of the Federal Water Pollution Control Act which requires the Commmonwealth to set up a management program to control their nonpoint source pollution.
- Correll D. "Vegetated Stream Riparian Zones: Their Effects On Stream Nutrients, Sediments, and Toxic Substances." (24) An annotated and indexed bibliography.
- "Fourth National Nonpoint Source Watershed Projects Workshop: Summaries of Presentations." (14) Summaries from the Implementation & Monitoring - An Alliance for Clean Water Workshop held in September of 1996. The workshop focused on providing technical and scientific support to nonpointsource watershed projects. (Publication #WQ-102)

 \star - indicates the Alliance for the Chesapeake Bay has a copy of the material.

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- Maryland Agricultural Nonpoint Source Workgroup. "Controlling Agricultural Nonpoint Source Pollution in Maryland." December 1992. (1)* This is an action agenda for nutrient management. It describes the programs designed to help Maryland reduce its nutrient load into the Bay by 40%.
- Peterson, G.W., J.M. Hamlett, G.M. Baumer, D.A. Miller, R.L. Day, and J.M. Russo. 1991. "Evaluation of Agricultural Nonpoint Pollution Potential In Pennsylvania Using A Geographic Information System." (21)* This report ranked and targeted the watersheds in Pennsylvania that contributed the greatest agricultural nonpoint pollution to the Chesapeake Bay. It determined this ranking through the Agricultural Pollution PotentialIndex. (Report #ER9105)
- Hamlett, J.M. and G.W. Petersen. 1994. "Conduct a Land Use and Nonpoint Source Pollution Study of Delaware Estuary Watershed." (21) This report uses already compiled data to develop a model relating the amounts of different nonpoint source pollutants entering the estuary compared to the type of land use in the watershed. (Report #ER9406).
- Maizel, M.S., Muehlbach, G., Baynham, P., Zoerkler, J., Monds, D., Ivari, T., Welle, P., Robbin, J., and Wiles, J. 1997. "The Potential for Nutrient Loadings from Septic Systems to Ground and Surface Water Resources and the Chesapeake Bay." (28) In cooperation with federal agencies and scientific research consortiums, studied population and physical data of the Chesapeake watershed to determine the potential contribution of nitrogen loadings from septic systems to contaminate ground water, surface water, and the bay.
- National Geographic Society. 1995. "Water Taking a New Tack on Nonpoint Water Pollution." (22) A full report of the National Forum on Nonpoint Source Pollution detailing the Forum's recommendations and the 25 demonstration projects selected as illustrative of ongoing nonpoint source protection and prevention efforts.
- New York State Department of Environmental Conservation. "New York State's Nonpoint Source Program, A Status Report." January 1995. (1)* This report outlines and summarizes the steady and significant progress New York has made addressing nonpoint source pollution in the state.
- Osmond, D.L., D.E. Line, and J. Spooner. 1997. "Section 319
 National Monitoring Program: An Overview." (14) An
 attractive 24-page report explaining the Section 319
 National Monitoring Program, and illustrated with color
 photographs. On-going projects in Pennsylvania and other
 states are highlighted in the report.
 Publication #WQ-90).
- * indicates the Alliance for the Chesapeake Bay has a copy of the material.

Osmond, D.L., D.E. Line, S.W. Coffey, J.B. Mullens, J.A. Gale, J. Saligoe-Simmel, and J. Spooner. 1996. "1996 Summary Report: Section 319 National Monitoring Projects." (14) An annual report providing project profiles for 18 of the USEPA-approved Section 319 National Monitoring Program projects under section 319 of the Clean Water Act. Publication #EPA-841-S-96-002)

VIDEOS

Keeping Soil on Construction Sites: BMP (15)

A 50 minute VHS video offers information on construction site erosion and sediment control.

Pointless Pollution (2)

A 28 minute video for general audiences. It addresses nonpoint source pollution in general and looks at various sites throughout the United States.

Riparian Forest Buffers - The Link Between Land & Water (9)* This Cooperative Extension Service 21 minute educational video illustrates the functions and values of the riparian forest habitat. It provides information on the "three-zone riparian management system," and visits both urban and rural buffer projects.

What is a Watershed? (29)

Produced by Adams Conservation District, this video uses the Piney/Alloway creek as an example to define what a watershed is and various activities which affect water quality and the watershed.

PA LEGISLATION

- "Nutrient Management Act." (5)* Pennsylvania House of Representatives, House Bill Number 2616-Act 6, 1993, Introduced during 1988 session: The goal of the act is to control the overload of nutrients going into Pennsylvania water systems and the implementation of nutrient management plans on all agricultural operations with 2,000 pounds of animal/acre of land. Five studies of other sources of nutrients are also required to be completed by the Department of Environmental Protection.
- "Storm Water Management Act." (5)* Pennsylvania Legislature, Public Law 864, Number 167, 1978: Implements and enforces comprehensive stormwater management in an attempt to minimize effects of run-off, including nonpoint source pollution.
- "The Clean Streams Law." (5)* Pennsylvania Legislature, Public Law 1987, Number 394, 1937: Sets water quality limits for waterways.

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