watershed focus

New Jersey Department of Environmental Protection · Division of Watershed Management

what's in focus

Fall 2006

NONPOINT SOURCE REPORT HIGHLIGHTS PAST SUCCESS AND FUTURE GOALS

The State of New Jersey 2006 Nonpoint Source (NPS) Report articulates New Jersey's NPS pollution control strategy and documents our progress over the past couple of years. Now available on the Department of Environmental Protection's website, the report describes the vital work that has occurred throughout the state and that remains ongoing in the realm of nonpoint source pollution control.

"While it is restorative for us to take a moment to revel in the pride of our past successes and accomplishments, we must be always focused on the work at hand, ever vigilant against new threats and continually planning for the future of watershed management. The DEP Division of Watershed Management wishes to acknowledge and thank our sister agencies for their contributions toward achieving real water quality protection and restoration," said Lawrence J. Baier, Director of the Division of Watershed Management.

The report highlights the fact that there is much more work to be done, with literally millions of dollars in needed funding to remediate the NPS-related water quality problems throughout the State.

*(**NPS REPORT** continued on page 3)*

New members of the Americorps New Jersey Watershed Ambassadors embarked on their seventh year with training at the School of Conservation in Stokes State Forest, Sussex County. Find out more about the new crew on page 8.

watershed focus

is a publication concentrating on watershed management, stormwater and nonpoint source pollution management issues in New Jersey. Send comments and subscription requests to:

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This newsletter is published with funding provided by the U.S. Environmental Protection Agency under Section 319 of the federal Clean Water Act.

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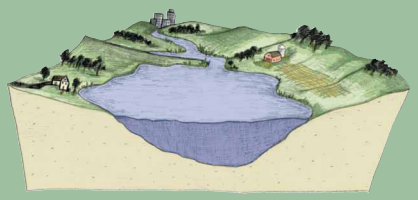


what's a watershed?

A watershed is the area of land that drains into a body of water such as a river, lake, stream or bay. It is separated from other systems by high points in the area such as hills or slopes. It includes not only the waterway itself but also the entire land area that drains to it. For example, the watershed of a lake would include not only the streams entering the lake but also the land area that drains into those streams and eventually the lake. Drainage basins generally refer to large watersheds that encompass the watersheds of many smaller rivers and streams.

Volunteer Monitors Efforts Recognized at 4th Annual Summit

By DANIELLE DONKERSLOOT, NJDEP Division of Watershed Management

Keynote presenters Debbie Mans, from Governor Jon Corzine's Office and Lawrence J. Baier, DEP Director of Watershed Management, shared their appreciation for the volunteer watershed community and their commitment to the preservation and protection of our waterways. "The efforts of the volunteer monitoring community are a crucial element in protecting and restoring the state's waterways," said Baier. Watershed Watch Network volunteers who assisted in developing the Department's volunteer monitoring database were recognized in a ceremony.

The New Jersey Department of Environmental Protection, in cooperation with the Watershed Watch Network Advisory Council and Monmouth University, hosted the 4th Annual Volunteer Monitoring Summit on November 2 and 3 at Monmouth University in West Long Branch, New Jersey. The purpose of the conference was to provide an opportunity for New Jersey volunteer watershed monitors and those from around the nation as well as at local, county and state agencies to meet and share information and techniques.

This year's Summit's theme "**Converting Data into Information to Initiate Local Changes**" was the common thread through the conference sessions. Emphasizing the importance of communication, three sessions focused on writing to be read, risk communication planning and using different audio/visual media outlets. Presentations also covered topics such as the NJ Stream Classification System, flow and velocity measurements, meter and equipment demonstrations, and coastal monitoring programs. These presentations will be posted shortly on the DWM website at www.nj.gov/dep/watershedmgt.

Eleanor Ely, editor of the *Volunteer Monitor* newsletter, Robert Carlson, professor at Kent State University, and Geoff Dates, coordinator at the River Network, shared their expertise and experience from the National Volunteer Monitoring perspective.

We would like to take a moment to thank the Watershed Watch Network members and presenters. Without their dedication and support, this Summit would not have been possible. This includes: Delaware Riverkeeper Network; Hackensack Riverkeeper; Great Swamp Watershed Association; Craft's Creek and Spring Hill Brook Watershed Association; Pompeston Creek Watershed Association; Stony Brook Millstone Watershed Association; South Branch Watershed Association; Delaware River Basin Commission; Freshwater and Biological Monitoring, NJDEP; Fish and Wildlife, NJDEP; Marine Water Monitoring, NJDEP; Cooperative Coastal Monitoring, NJDEP; Clean Shores, NJDEP; New Jersey Geological Survey, NJDEP; US Geological Survey; Monmouth County Health Department; Wallkill Watershed Management Group; Water Assessment Team, NJDEP; enfoTech; Geographic Information System Center, NJDEP; Total Maximum Daily Load Team, NJDEP; US Environmental Protection Agency, Region 2; and River Network.

NPS REPORT

(continued from page 1)

Realizing prevention is less costly than fixing the problems, New Jersey has in place many mechanisms for preventing nonpoint source pollution, including groundbreaking legislation like the Highlands Act and regulations like the Stormwater Management Rules, outreach campaigns, model municipal ordinances and open space preservation programs. But the reality is that New Jersey is the nation's most densely populated state and must attempt to undo so much damage that has already occurred here.

Addressing NPS pollution requires a comprehensive control strategy that includes source identification, establishment of best management practices, public education and cooperation among many levels of government and the local community.

Since 2000, the Division of Watershed Management has established 279 Total Maximum Daily Loads (TMDLs) for impaired waterbodies where nonpoint sources predominate. As part of the TMDL, nonpoint sources are identified and an implementation plan for nonpoint source load reduction is established. The implementation plan includes a suite of completed, ongoing and planned activities needed to achieve the identified load reduction. In many cases, the activities are made possible through the use of US Environmental Protection Agency 319(h) grant awards as well as other local, state and federal funding sources.

The report illustrates how the work of the DEP, as well as other state agencies and local watershed groups, is integrated to combat NPS pollution. These efforts are highlighted by case studies in Wreck Pond, Lake Hopatcong, Rockaway River, Seaside Heights, and Long Brook. Restoration work also includes the DEP's Clean Shores Program, 604(b) Grant Program, and Coastal Nonpoint Source Pollution Control (6217) Program. The NJ Department of Agriculture implements best management conservation practices on agricultural lands through a number of technical and financial assistance programs.

The Division's Education and Outreach Programs work both to protect as well as restore the state's watersheds affected by nonpoint source pollution. From workshops to publications, the goal is changing behaviors that cause nonpoint source pollution by providing people with the knowledge to make informed choices. Through the NJ Watershed Ambassadors Program, AmeriCorps members educate schoolchildren and adults about water. Teachers learn how to use Project WET (Water Education for Teachers) to educate their students through hands-on lessons. Urban students learn about their connection to water through the Urban Watershed Education Program. Local watershed associations learn how to monitor their local waterways through the Watershed Watch Network.

Innovative legislation and regulations are designed as water quality protection measures to protect the state's declining water supply and ensure water quality for all New Jersey's residents and wildlife. The recently enacted Highlands Water Protection and Planning Act and Stormwater Management Rules both provide protection for the state's threatened water resources. The Water Quality Management Planning Rules establish DEP's general regulatory framework for water quality planning and supplement other rules pertaining to wastewater.

The 2006 Nonpoint Source Report is now available online. To access the report, visit the DEP Division of Watershed Management website at www.nj.gov/dep/watershedmgt/nps_program.htm and click on *2004 - 2006 State of New Jersey Nonpoint Source Report*.

What and Why is a TMDL?

TMDLs are the calculated assimilative or carrying capacity of the receiving water taking into consideration point and nonpoint sources of pollution, natural background, and surface water withdrawals. A TMDL identifies all the contributors of the pollutant of concern and sets load reductions needed to meet surface water quality standards.

TMDLs are required, under Section 303(d) of the federal Clean Water Act, to be developed for waterbodies that cannot meet surface water quality standards after the implementation of technology-based effluent limitations. A TMDL then sets the Waste Load Allocations (WLA) and Load Allocations (LA) for point and nonpoint sources, respectively. The TMDL approach included implicit and explicit margins of safety (MOS) to assure implementation of the load reduction will fully restore designated uses in the waterbody.

TMDL = WLA + LA + MOS

new integrated wq list & tmdls based on watershed boundaries

A new spatial extent methodology based on watershed delineations is now being used to represent assessed waterbodies in the DEP's recently proposed *New Jersey 2006 Integrated Water Quality Monitoring and Assessment Report* (Integrated Report). This spatial extent methodology identifies the state's water quality based on Hydrologic Unit Code (HUC) 14 Assessment Units rather than just relying on discrete monitoring locations. This change in assessment methodology is aimed at determining the attainment or non-attainment status of all designated uses within each subwatershed or "Assessment Unit."

The advantage of this new watershed-based methodology is that the state has a stable and smaller number of HUC 14 subwatersheds to assess rather than a variable and large number of stream segments. There will be more comparability between reports since the number and size of assessed units will remain the same. This new methodology provides a more comprehensive coverage of the state's water, in that an assessed area will not change as the sampling site changes. Each HUC 14 is evaluated for attainment of designated use(s) based on a suite of parameters and placed on the appropriate list (1 to 5) rather then listed by individual parameter. The DEP held public information session on this new methodology in May and June.

In the past, water quality impairments were identified by a discrete monitoring location. Each monitoring station was then associated with a particular stream segment, which was representative of the water quality results at that monitoring location. In this way, Total Maximum Daily Loads (TMDLs) were developed for designated "impaired segments" of a stream rather than a HUC 14 subwatershed.

A HUC is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the United States Geological Survey on State Hydrologic Unit Maps. An average HUC 14 is 8.5 square miles. Therefore, under the new assessment methodology impairments are based on designated use attainment rather than discrete parameters.

Future TMDLs from 2007 and on will be based on HUC 14 assessment units and all monitoring sites within the HUC 14 boundary are extrapolated to represent all streams and tributaries within the boundary.

Designated uses include:

- Aquatic Life (General) - All Waters
- Aquatic Life (Trout) - FW1 & 2, PL
- Primary Contact Recreation - FW1 & 2, PL, SC, SE1
- Secondary Contact Recreation - All Waters
- Drinking Water - FW2, PL
- Agriculture Water Supply - FW2, PL
- Industrial Water Supply - FW2
- Fish Consumption - All Waters
- Shellfish Harvest - SC, SE1

*All Waters include: Fresh Water 1 & 2, Pinelands Water, Saline Coastal, Saline Estuary 1, 2 & 3

Historical River and Stream Assessment

Prior to 2002, DEP issued two river and stream assessment reports separately as required by the US Environmental Protection Agency:

- New Jersey Water Quality Inventory Report 305(b) that described the status and trends in New Jersey's water quality; and
- 303(d) list of Impaired Waters ONLY

In 2002, the DEP combined the 305(b) Report and the 303(d) list into *New Jersey Integrated Water Quality Monitoring and Assessment Report*. According to the 2002 Integrated Report for the 6,330 mi. of non-tidal river and streams in New Jersey:

- Only 2,295 mi. (36%) have been assessed; and
- 83% (1,907 mi.) of river miles did not meet New Jersey's surface water quality standard for at least 1 parameter.

From Impaired Listing to TMDL

The current US EPA's Integrated Listing Guidance defines 5 categories or sublists in which a waterbody may be placed:

Sublist 1: Waterbody is attaining for all designated uses and no uses are threatened;

Sublist 2: Waterbody is attaining designated use;

Sublist 3: Insufficient or no data to determine if the designated use is attained;

Sublist 4: Impaired or threatened for one or more designated uses but does not require the development of a TMDL because: a. TMDL has been completed; b. Other enforceable pollution control requirement are expected to result in attainment; or c. Impairment identified is not caused by a pollutant.

Sublist 5 (*formerly 303(d) list*): The designated use is not attained and the waterbody is impaired or threatened for one or more designated uses by a pollutant(s).

When a waterbody is listed on Sublist 5, the DEP has three options to pursue. It can either (1.) develop a TMDL, (2.) determine that waterbody is now meeting water quality standards or (3.) determine that a TMDL is not appropriate method for achieving SWQS and that other control actions will result in meeting standards.

The DEP's Watershed Assessment Team within Water Monitoring and Standards spearheads the preparation of the biennial Integrated Water Quality Monitoring and Assessment Report. The Bureau of Environmental Analysis and Restoration within the Division of Watershed Management prepares TMDLs to address water quality impairment statewide.

The 2006 Integrated Water Quality Monitoring and Assessment Methods document may be downloaded from the DEP website at www.nj.gov/wmm/sgwqt/wat/integratedlist.html. For more information on the TMDLs, visit the Division of Watershed Management website at www.nj.gov/dep/watershedmgt/tmdl.htm

2006 Enhancements to Integrated Water Quality Monitoring and Assessment Report

- Waterbodies based on subwatersheds
- Subwatersheds are Hydrologic Unit Code (HUC) 14 as delineated by USGS
- Stable number of waterbodies to be assessed less than 1,000
- Previously assessed more than 6,000 waterbodies
- Assessment based on all stations assigned to the HUC 14
- Each HUC 14 is evaluated for attainment of designated use(s) based on a suite of parameters and placed on the appropriate list (1 to 5) rather than listed by individual parameter
- This new method provides a more comprehensive coverage of the state's water, in that an assessed area will not change as the sampling site changes.

URBAN WATERSHED EDUCATION PROGRAM
now older than most of its participants

By LYNETTE LURIG, NJDEP Division of Science, Research & Technology

This spring, the Urban Watershed Education Program will enter its 12th year, making it older than many of the 5th and 6th grade students that participate in the program. Using local natural resources as its base, this program has educated over 2,000 children in such urban areas as Jersey City, Newark, Camden, Trenton, Bayonne and Elizabeth.

"I am very pleased that our young people are receiving an education about the importance of our natural environment," said Joseph V. Doria, Jr., Mayor of Bayonne.

The goal of the Urban Watershed Education Program is to build an awareness of the complexity and interrelated nature of an urban estuary. By relating abstract environmental topics to their local community with interactive programming, the students gain an increased understanding of their environment and their role in it. After completing the program, students have been given the foundation on which to develop a positive interaction and a sense of stewardship with natural resources in the state.

"I feel this program is a great way to learn about nature and our environment and is a great opportunity for these students to get out of their science classes and learn hands on about water protection laws and the state's waterways," said Daniel J. Reinman, Mayor of Carteret.

The children, mostly middle school students, are engaged in hands-on activities for four days. On the first day, the children learn about the complexities of the urban estuary in which they live. They are introduced to such concepts as bioaccumulation, watersheds and climate change. On the second day, the children build upon these concepts through a community litter cleanup and storm drain marking, which help them understand the importance of nonpoint source pollution prevention.

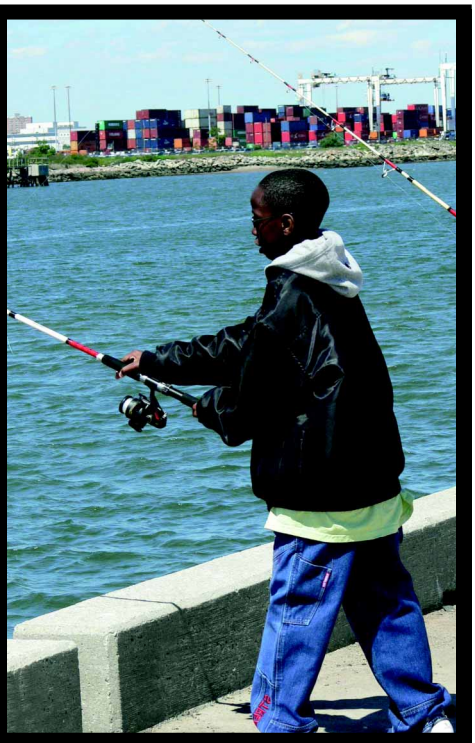
On the third day, the children have an opportunity to see their community from the water. In addition to conducting water quality testing, everyone goes on an eco-cruise with the Hackensack RiverKeeper on his or her local waterway. For many of them, it is the first time on a boat, giving them a new perspective of their community. "It's been a great experience to try these new things, like going on a boat," said a 5th Grade Student.

For the last day of the program, everyone heads to the local waterfront for a day of fishing. The children learn what it means to be an ethical angler. Topics such as catch and release, proper use of equipment, what fish need to live and what fish can be found in the local waters are discussed. Also the students learn which species are not to be consumed and how to properly fillet a fish to limit their exposure to contaminants of concern. The day of fishing concludes with an anatomy lesson, which includes a fish dissection.

Environmental education programs that provide hands-on experiences help create a greater awareness of their place in the environment. Studies show that a child's knowledge of and attitudes toward nature is typically gained through discreet contact, not reading a book in a classroom or watching a video. "Thank you for the fun time I had. I also want to thank you for all I learned in the past few days," said a 5th Grade Student in Elizabeth.

Originally, the program was an extension of a wider community-based public information effort to inform citizens about the dangers of consuming recreationally caught fish and crabs from certain state waters. However, it is so much more than that now. Related topics and issues have rounded out the breadth of the program.

Started by the Department of Environmental Protection's Division of Science, Research & Technology, the program is now run jointly with the DEP Division of Watershed Management. The program would not be possible without many partners, including the Hackensack RiverKeeper, the City of Bayonne and the Watershed Ambassadors AmeriCorps Program. For more information about the Urban Watershed Education Program, visit www.nj.gov/dep/dsr/urbanfishing/index.htm. For more information about NJ fish consumption advisories, visit www.fishsmarteatsmartnj.org



The Urban Watershed Education Program consists of four days of engaging, hands-on activities, including storm drain marking, an eco-cruise and fishing, for children in grades 5 and 6 who live in urban areas throughout New Jersey.

AMERICORPS WATERSHED AMBASSADORS

Embark on 7th Year of Service to

Do you want to discover more about your local watershed? Are you looking for an exciting environmental presentation for your classroom or community group? Are you interested in learning about volunteer monitoring techniques? The New Jersey Watershed Ambassadors Program can help you.

Members are available to make free interactive presentations to community organizations and schools. These provide information about water and watershed issues within the state. Watershed Ambassadors also monitor local rivers using Visual Assessment and Biological Assessment protocols and can train community volunteers how to use these protocols.

Over 90 percent of teachers evaluated these presentations and trainings as excellent. Commentary included: "Very informative and enjoyable!"; "I learned how much we influence the water and life."; "I can use this information in my own yard!"; "Very helpful and thorough program. The presenters were very enthusiastic and knowledgeable."; and "I worked with the watershed ambassadors over the past several years. The program they offer is invaluable to my students!"

The New Jersey Watershed Ambassadors Program is a community-based AmeriCorps program now in its seventh year. The DEP Division of Watershed Management has hosted this environmental program since September

2006-2007 NJWAP MEMBERS

WMA 1 - Upper Delaware
Jennifer Sheehan - (908) 735-0733 x111

WMA 2 - Wallkill
Kira Dacanay - (973) 579-6998 x133

WMA 3 - Pompton, Pequannock, Wanaque & Ramapo
Anthony Coleman - (973) 962-6602

WMA 4 - Lower Passaic & Saddle River
Carrie Deitz - (973) 817-5784

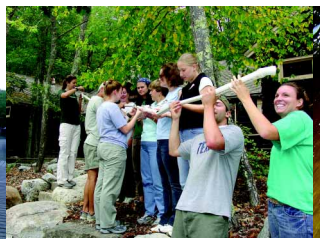
WMA 5 - Hackensack, Hudson & Pascack
Margaret Chabot - (201) 968-0808 x105

WMA 6 - Upper & Mid Passaic, Whippany & Rockaway
Vicki Potucek - (973) 635-6629

WMA 7 - Arthur Kill
Kevin Hannon - (908) 527-4032

WMA 8 - North & South Branch Raritan
Katherine Axt - (908) 234-1852 x20





o Local Communities

By MICHELLE RUGGIERO, NJDEP Division of Watershed Management

2000. AmeriCorps members participate in two weeks of intensive training in watershed management issues, volunteer monitoring techniques, and presentation skills. The members are then placed in watershed management areas across the state, ready to serve their watershed communities. In addition to presentations, trainings and monitoring, the members also partner with volunteers and other groups to organize watershed stewardship activities and events such as stream cleanups, water festivals, and restoration projects.

Created in 1993, AmeriCorps is a network of national service programs that engage more than 70,000 Americans each year in intensive service to meet critical needs in education, public safety, health, homeland security, and the environment. AmeriCorps members serve through more than 3,000 nonprofits, public agencies, and faith-based organizations. They tutor and mentor youth, build affordable housing, teach computer skills, clean parks and streams, run after-school programs, and help communities respond to disasters.

To schedule a presentation or learn more about volunteer monitoring, contact the Watershed Ambassador in your area. For more information about the program, contact Michelle Ruggiero, Program Manager at (609) 292-2113.

WMA 9 - Lower Raritan, South River & Lawrence
Ali Astalos - (908) 685-0315 x31

WMA 10 - Millstone
Anneli TerryNelson - (609) 737-3735 x14

WMA 11 - Central Delaware Tributaries
Lorna Gifis - (609) 883-9500 x246

WMA 12 - Monmouth
Jenna Provost - (732) 683-2287

WMA 13 - Barnegat Bay
Erin Denniston - (732) 928-2360

WMA 14 - Mullica
Jennifer Ivanowski - (609) 812-0649 x214

WMA 15 - Great Egg Harbor
Erin Moratelli - (609) 272-6974

WMA 16 - Cape May
Helen Edwards - (609) 465-1082

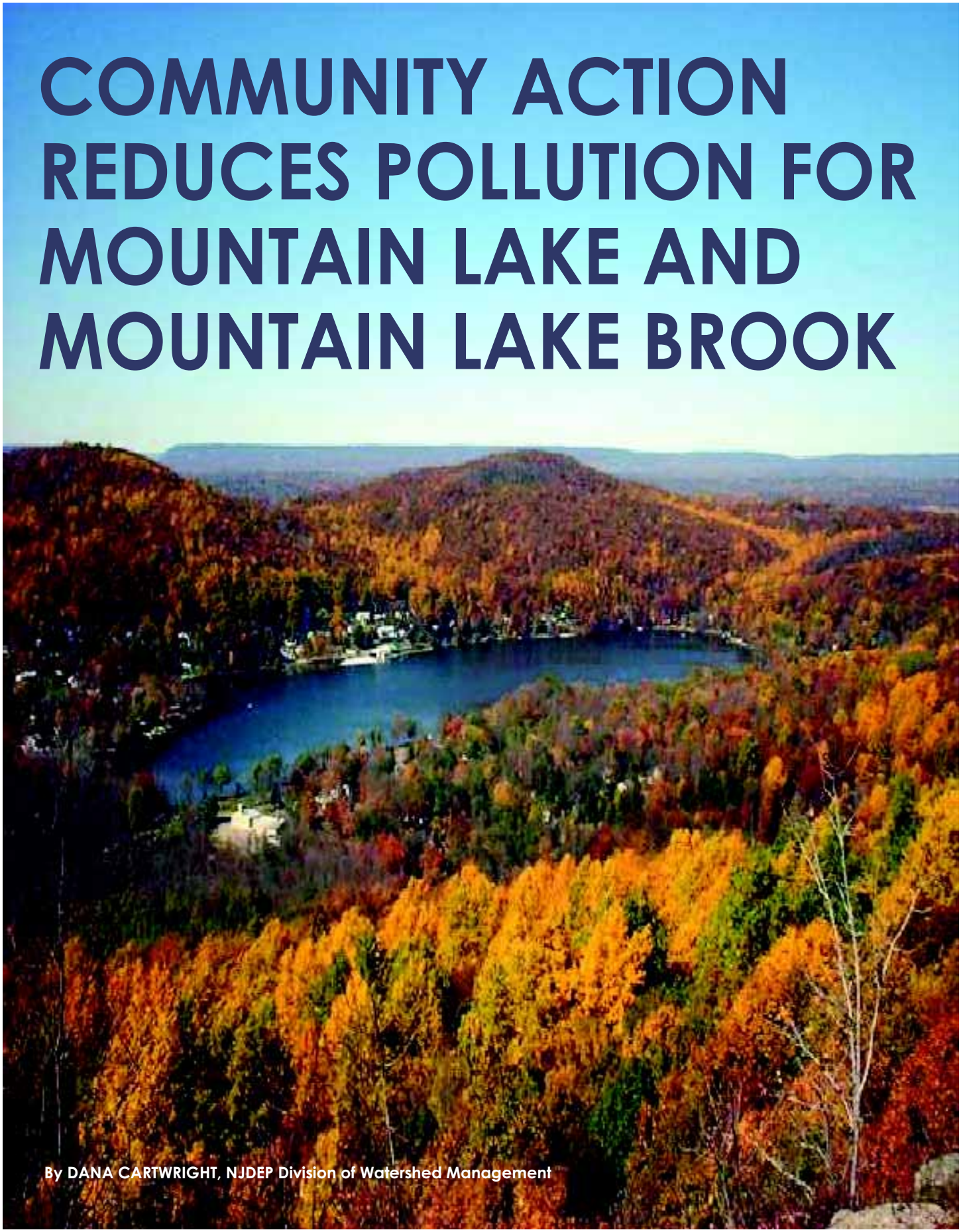
WMA 17 - Maurice, Salem, Cohansey
Ellen Pattee - (856) 825-3700 x4010

WMA 18 - Lower Delaware
Bryan Mascio - (856) 614-3600 x3664

WMA 19 - Rancocas Creek
Katie Caffee - (609) 859-8860 x17

WMA 20 - Assiscunk, Crosswicks & Doctors
Rachel Orobono - (609) 586-9603

COMMUNITY ACTION REDUCES POLLUTION FOR MOUNTAIN LAKE AND MOUNTAIN LAKE BROOK



By DANA CARTWRIGHT, NJDEP Division of Watershed Management

After many years of planning and preparation, the Liberty Township Environmental Commission and Mountain Lake Community Association & Watershed Advisory Group are enthusiastic about the recent installation of stormwater treatment units in their Warren County Community. The stormwater treatment units will help to remove pollutants from stormwater runoff, preventing excessive nutrients and sediment from entering the Mountain Lake and Mountain Lake Brook.

"It is very satisfying that all the volunteer hours spent and the partnerships formed have finally evolved into a project that will actually reduce pollution and help in the preservation of the Mountain Lake Bog and Brook, as well as raising the residents' awareness of nonpoint source pollution. Our consultant, Applied Water Management, has been great right from the initial application through the final installation, including all the ups and downs along the way," said Eileen Greason, Secretary of both the Liberty Township Environmental Commission and the Mountain Lake Community Association & Watershed Advisory Group.

"Working with the Division of Watershed Management has been quite an educational experience for us, and we're very grateful for all their assistance in helping us protect the water quality in our region. This nonpoint source pollution control project has been a major undertaking for our small, rural community," said Greason.

The long-term commitment began in 1992 with a series of matching grants through the Department of Environmental Protection's Environmental Services Program for studies leading up to the application for 319(h) funds in 2002. With the faithful commitment of dedicated volunteers and with the professional experience of Spencer Pierini, Senior Project Engineer, and Adam Stern, Senior Managing Engineer, from Applied Water Management, Inc. the Mountain Lake community embarked on a mission to prevent the pollution of Mountain Lake Bog and Brook and to preserve their local natural resources.

Throughout the course of the project, the Division of Watershed Management, Mountain Lake community volunteers, and engineering staff from Applied Water Management have worked closely to ensure the project's successful completion. "During this project's progression we felt as if we had a personal stake in the future of Mountain Lake and Mountain Lake Brook. And in the end, we do. We all do. Every one of these projects, big and small, protects the future of New Jersey's waterways, ensuring they exist for posterity," said Spencer Pierini of Applied Water Management.

In 2003, the Liberty Township Environmental Commission was awarded grant funding to install a vortex-type large capacity advanced oil and grit separator (AOGS) and 10 stormwater catch basin filters. The grant was funded by the federal Environmental Protection Agency Section 319(h) grant program for nonpoint source pollution and is administered by the DEP Division of Watershed Management.

The Mountain Lake watershed has been experiencing the effects of cultural eutrophication, which is the excessive accumulation of nutrients in waterways caused by everyday human activities and stormwater runoff. An excess of nutrients causes low dissolved oxygen levels, an increase in plant productivity, and eventual harmful effects on the ecology of a water body.

For more information about this project, contact the Liberty Township Environmental Commission for educational brochures developed as part of this undertaking at libertyc@comcast.net or www.libertytownship.org. For more information about nonpoint source pollution, visit the Division of Watershed Management website at www.nj.gov/dep/watershedmgt

Get The Phosphorus Out

Cutting the Link from Green Lawns to Green Water

Many New Jersey residents will soon be required to use phosphorus-free fertilizer. Over 100 municipalities will be required to adopt ordinances that ban the use of fertilizer containing phosphorus.

Phosphorus has been identified as a significant pollutant in many waterways in the state and phosphorus from fertilizer has been identified as a pollution source. Since most soils have plenty of phosphorus for grass and other plant growth, requiring the use of phosphorus-free fertilizer is one way to control phosphorus pollution that makes environmental and economic sense.

What is Phosphorus?

Phosphorus is an essential nutrient for plant growth and is contained in many fertilizers. Phosphorus is an element found naturally in the air, soil, rocks and organic materials. There are many natural sources of phosphorus such as decomposing plant matter, phosphate rock, and fecal matter. But human activity is the most abundant source, either from household wastewater or fertilizers.

Why isn't more better?

Statewide soil test results indicate that most soils have plenty of phosphorus for plant growth. When phosphorus fertilizer is applied unnecessarily, stormwater washes away the excess phosphorus from lawns and gardens to local waterways.

Phosphorus can be thought of as junk food for aquatic plants. Just one pound of phosphorus can produce 10,000 pounds of algae and aquatic plants. Too much phosphorus can cause algae blooms; reducing water quality and clarity. Also, when the algae bloom is over, and the bacteria start decomposing the algae, it can lead to foul odors and fish kills due to lack of oxygen. These conditions can eventually prevent recreational use for fishing and swimming.

As a result, many New Jersey waterways are considered impaired because the levels of phosphorus in the water exceed the surface water quality standard.

From TMDLs and Fertilizer Ordinances

As the DEP Division of Watershed Management develops Total Maximum Daily Loads (TMDLs), they are submitted to the US Environmental Protection Agency for approval. Once approved, the TMDL is adopted by DEP as a water quality management plan amendment and the adoption notice is published in the NJ Register.

The Department is in the process of adopting each of the phosphorus TMDLs to the appropriate water quality management plan and does not anticipate that there will be significant, if any, change to TMDL implementation plans upon its adoption. The adoption of fertilizer ordinances is part of the implementation plan to reduce phosphorus. These phosphorus

TMDLs will affect 110 municipalities, primarily in the northeastern section of the state.

When these phosphorus TMDLs become adopted, the implementation plans become part of the DEP regulatory framework. Municipalities located in those watersheds with phosphorus TMDLs will be required to adopt local ordinances that prohibit the use of fertilizers containing phosphorus except under special circumstances. This adoption of this ordinance will be required through the Municipal Stormwater Permit Program.

A copy of the ordinance is available on the Division website. The ordinance does allow residents to use fertilizer with phosphorus if they can provide a soil test showing a phosphorus deficiency or if they are establishing new lawns or plants. In addition, commercial farming is exempt from the ordinance.

In order for the ordinance to be effective, municipalities should work with their residents to encourage behavior changes with respect to selection and application of fertilizers. The DEP is currently developing strategies and materials for municipalities to use in these efforts.

Phosphorus-free Across the Country

On a national scale, many communities require the use of phosphorus-free fertilizers. From Minnesota to New Mexico, ordinances banning the application of phosphorus-containing fertilizers have been adopted in order to improve water quality. Many communities and agencies work with local retailers and fertilizer producers to insure that appropriate fertilizers are available.

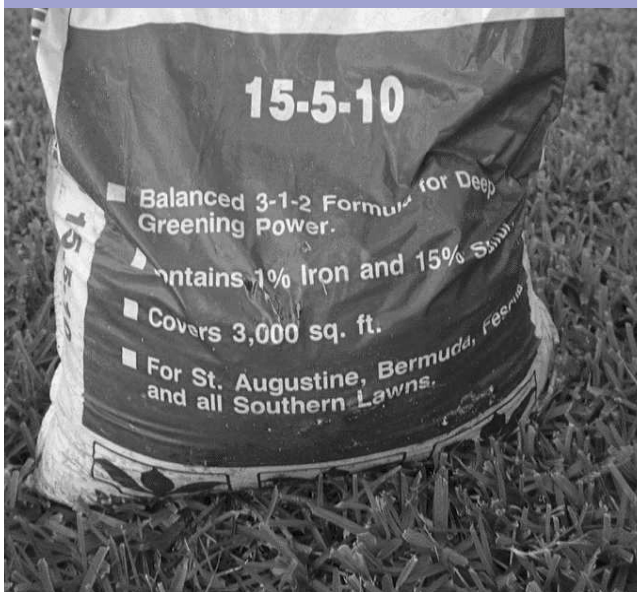
In 2006, the Chesapeake Bay Program announced a Watershed Partnership with the Lawn Care Product Manufacturing Industry to reduce nutrient losses from lawns, including reducing phosphorus from fertilizers. Minnesota established a statewide ban on the use of phosphorus containing lawn fertilizer in 2005.

Fertilizer Bag Numbers

The numbers on a bag of fertilizer refer to the percentages of plant nutrients: nitrogen (N), phosphorus (P) and potassium (K) in the fertilizer. In a 100-pound bag of a 5-10-10 mixture, for instance, there would be 5% (5 pounds) of nitrogen, 10% (10 pounds) or phosphorus and 10% (10 pounds) of potassium.

A phosphorus-free fertilizer would have a middle number of zero, such as 10-0-5.

These nutrients are necessary for plant health and growth. Nitrogen is needed for healthy green growth and regulation of other nutrients. Potassium and phosphorus help proper root and seed development and disease resistance.



DEP UPGRADES STANDARDS TO PROTECT SURFACE WATER

In October, the Department of Environmental Protection announced the final adoption of regulations that will upgrade the state's surface water quality standards to achieve cleaner water statewide.

"With these upgraded standards, we can safeguard our public drinking water supplies and protect critical habitats for threatened and endangered species," said Commissioner Lisa P. Jackson.

The newly adopted rules establish more stringent standards for more than 100 toxic pollutants to protect human health and a broad range of aquatic species. Discharge permits will be revised to ensure compliance with these tougher standards, which are based on updated scientific information.

With this adoption, five streams will receive a Category 1 (C1) designation, which prevents any measurable deterioration in existing water quality, limiting development impacts and discharges to streams. The five streams, totaling 12 miles, received the upgraded classification based on their trout production status. The designations were based on stream sampling data collected by DEP's Division of Fish and Wildlife.

DEP's Surface Water Quality Standards establish the water quality criteria necessary to protect the state's waters. Each water body is assigned specific designated uses, a stream classification and anit-degradation designation. The standards are used to develop effluent limitations for wastewater discharges, to identify protected areas under DEP's stormwater management rules and to determine the buffer to apply to wetlands areas.

Under the new rules, DEP will apply new temperature criteria to protect trout production streams. The adopted rules also establish more stringent criteria for dissolved oxygen, ammonia, and total suspended solids for all streams that receive upgraded protection based on their ability to support trout populations. These more stringent criteria apply to all dischargers who require a DEP surface water discharge permit and are located on an upgraded water body.

The new rules also establish upgraded criteria for mercury and PCBs, as well as a new monitoring requirement. Dischargers will now be required to use more sensitive analytical methods for monitoring mercury and PCBs, enabling DEP to better identify and track reductions in PCB and mercury levels.

The following is a list of the streams that received a C1 designation in October:

- Beech Brook in West Milford
- A section of the Saddle River in Upper Saddle River
- Stone House Brook in Butler
- A section of the Wanaque River in Pompton Lakes
- Wanaque River Tributary in Hewitt

The Surface Water Quality Standards rules and a copy of the adoption document can be found at www.nj.gov/dep/rules/. The adoption was published in the New Jersey Register on October 16, 2006.

adopt a beach volunteers CLEANUP over 2,700 pounds of trash

An enthused and large group of New Jersey volunteers participated in the International Coastal Cleanup in September through the Department of Environmental Protection's Adopt A Beach Program. Over 300,000 volunteers in 100 countries participate in this largest single day volunteer environmental event sponsored by the Ocean Conservancy. Eight million pounds of debris were removed from 11,000 miles of beaches and shorelines.

Over 246 volunteers from around the state removed 2,728 pounds of trash and covered 70.75 miles along the state's famed coastline. There was a variety of debris found including beverage bottles, paper goods, smoking related items, fishing/boating equipment and medical/personal hygiene items.

"It is the group leaders and volunteers who make the clean up project effective and successful. We value and appreciate their commitment, time, support and participation," said Lawrence J. Baier, Director of the DEP Division of Watershed Management.

"The results are important as this event enhances public awareness that trash should not be part of the marine environment. Debris is recognized as an eyesore and as a threat to the local economy and environment," said Baier.

"The results clearly indicate that this is a 'people problem.' Changing human behavior and attitude can solve it. The public needs to exercise more responsibility to keep our beaches clean, safe and beautiful," said Eileen P. Thornton, Adopt A Beach Coordinator. The debris collection can help educate individuals, businesses and communities.

The next cleanup is scheduled for Spring 2007. The Division of Watershed Management is now recruiting more volunteers and group leaders so that next year's project will be even bigger. Businesses, organizations and individuals who are interested in being a part of this important project should contact Adopt A Beach Coordinator Eileen P. Thornton at (609) 29BEACH or eileen.thornton@dep.state.nj.us

STREAM SCHOOL SET FOR MARCH 21 & 22

Mark your calendars for Stream School on March 21 and 22, 2007. Stream School is a two-day training focusing on macroinvertebrate identification conducted by Stroud Water Resource Center.

The Center's staff is internationally acclaimed for its pioneering research on streams and rivers. The scientists work in interdisciplinary research teams, blending their individual talents in chemistry, microbial ecology, invertebrate biology, watershed ecology, and ecosystem modeling to study the physical, chemical, and biological processes of streams and rivers, the life histories of individual organisms, and the ecology of watersheds.

The New Jersey volunteer monitoring community is encouraged to take this course as part of the DEP's requirements to volunteer data credibility.

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