

MDE Environment

Maryland Department of the Environment

January 1999

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Northrop Grumman Wins *Businesses for the Bay* Excellence Award

by Laura Armstrong

Northrop Grumman's Electronic Sensors and Systems Sector received the *Businesses for the Bay* Excellence Award for large businesses from the Chesapeake Executive Council at its meeting last month. Northrop Grumman, located near the Baltimore-Washington International Airport, employs more than 7,400 people to design and produce advanced electronics for government, industry and personal use. The use of alternative products has allowed Northrop Grumman to reduce their use of metal-cutting lubricants and alkaline cleaners and to eliminate

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Maryland Delegate John F. Wood, Jr. (far right) with Northrop Grumman representatives receiving the *Businesses for the Bay* Excellence Award in the large business category.

New Regional NOx Plan Builds on Earlier Reductions

by Frank Courtright and Dorothy Guy

The U.S. Environmental Protection Agency issued a final regional nitrogen oxide (NOx) reduction plan in late 1998 that requires Maryland, 21 other Eastern states and Washington D.C., to further reduce NOx emissions and edge closer to attainment of ground-level ozone standards. Controlling NOx emissions from large stationary sources, including industry and electric utilities, and mobile sources, is the most effective way of reducing these harmful emissions since NOx is produced primarily from the burning of fuel.

Maryland's attainment goal was set at 22 percent reduction by May 2003. As a result, EPA's plan is expected to reduce NOx emissions by 21,000 tons during Maryland's summer ozone season. In the northeast states, the reductions required by EPA's plan are roughly similar, but in some cases slightly more restrictive, than those required under the

Ozone Transport Commission regional plan.

States must submit their reduction plans to the EPA by September 1999. The submittal must include enforceable regulations to achieve the required reductions in NOx emissions and a plan to allocate NOx emissions to Maryland sources. The Maryland Department of the Environment is working with affected sources and other interested parties to determine how the reductions will be made.

Historically, efforts to control the formation of ground-level ozone, Maryland's most pressing air pollutant, were focussed on reducing emissions of volatile organic compounds (VOCs), one of the precursors of ozone. While these VOC emission reductions produced some lowering of ambient ozone levels, it became clear that additional measures were

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Public Meetings to be Held to Discuss Maryland's Environmental Goals

by Regina Rochez, John Mitchell and Suzanne Bond

The Maryland departments of the Environment and Natural Resources and Region III of the U.S. Environmental Protection Agency (EPA), will hold public meetings across the state beginning in late January to discuss Maryland's progress toward achieving its environmental goals. Sessions are planned to offer citizens insight into the environmental issues that are most critical to them and to provide comment on environmental indicators that measure the agencies' progress towards reaching the State's environmental protection and natural resource management goals.

During public meetings held in 1996 and 1997, hundreds of citizens, local government officials and organizations provided input that helped shape *Maryland's*

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Tentative Meeting Schedule

January 25, 1999

Charles County Community College – Center for Business & Industry – Rm. BI113E

January 27, 1999

Perryville High School Auditorium

February 1, 1999

Maryland-National Capital Park and Planning Commission Auditorium

February 3, 1999

Cambridge-South Dorchester High School - Auditorium

February 8, 1999

Hagerstown Junior College Classroom Building, Rm. CLR111

February 10, 1999

Department of Education Division of Rehabilitation Services Baltimore City

All meetings

**Informal discussion - 4 - 5:30 p.m.
Presentation/Q & A - 7-9 p.m.**

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Regional NOx Plan....

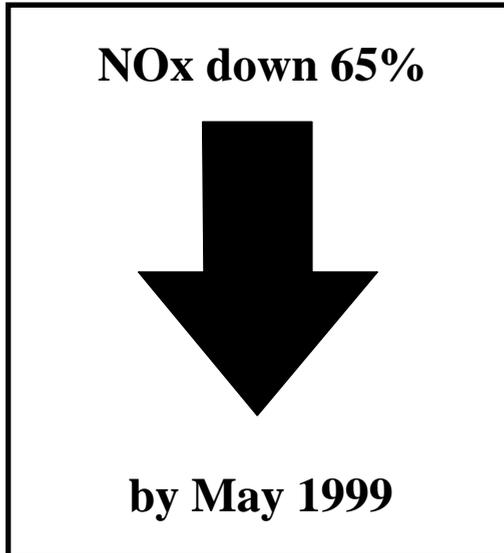
needed, leading to an increased focus on the other ozone precursor—nitrogen oxides.

Based on the Clean Air Act Amendments of 1990, reductions of NOx emissions for facilities emitting NOx in Maryland have progressed in three phases. The federal Clean Air Act requires that all major NOx sources install Reasonably Available Control Technology (RACT). The first requirement is a source-specific requirement to achieve “reasonable” reductions. All affected sources in Maryland have submitted and implemented their NOx RACT requirements. RACT achieved a 28,000 ton reduction of NOx during the summer ozone season in Maryland.

The Clean Air Act also created the Ozone Transport Commission. This group of states from Northern Virginia to Maine, known as the Ozone Transport Region, has been working together to reduce ground-level ozone in the Northeast. After several years of studying the transport of ozone and its precursors, the Ozone Transport Commission determined that NOx emissions and ozone not only are transported on air currents, but also have a significant effect on ozone in downwind areas when transported. In 1994, the Ozone Transport Commission finalized a Memorandum of Understanding that instituted a regional NOx reduction plan for the region, requiring significant NOx reductions beyond RACT levels from large boilers which are predominantly utilities.

The Ozone Transport Commission regional NOx reduction plan contemplated two levels of NOx reductions. The first level is a requirement to achieve a 55 percent or 65 percent reduction in NOx emissions by 1999 depending on a source’s location within the region. Ozone Transport Commission states have since acted to implement these reductions by adopting individual state regulations to accomplish the reductions. Maryland’s NOx reduction regulation became effective on June 1, 1998 and requires utilities

and other major sources to reduce NOx emissions by as much as 65 percent by May 1999. When implemented, Maryland’s regulation is expected to achieve a 35,000 ton reduction in NOx emissions during the summer ozone season. Sources can accomplish these reductions by installing controls or purchasing



allowances from other sources. The utilities have sued MDE over the regulation, challenging the May 1999 compliance deadline and stating that allowances will not be available to those seeking to purchase them.

The second level of NOx reductions under the Ozone Transport Commission’s regional NOx reduction plan would come into play if further study and modeling shows a need and would require a 75 percent reduction by 2003.

Finally, the EPA and the Environmental Council of the States convened the Ozone Transport Assessment Group to carry out the needed additional study and modeling. Composed of EPA officials, 37 states from the Rocky Mountains eastward, industry and trade association representatives, and health and environmental groups, the Ozone Transport Assessment Group confirmed the importance of ozone transport outside of the Northeast. Modeling from the group also indicated that additional NOx reductions would be needed for ozone attainment. In July 1997, the group issued final recommendations to EPA about controls for both volatile organic compounds and NOx to address long-range transport of ozone and ozone precursors. The recommendations covered a range of sources including utilities, other large and small stationary sources, motor vehicles, diesel engines, fuels and consumer products. This work served as a basis for the new EPA regional NOx reduction plan announced earlier.

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Businesses For the Bay

the use of solvents as a metal degreaser. Northrop Grumman uses paints with low levels of volatile organic compounds and equipment that allows them to apply less paint to their products without reducing quality. At Northrop Grumman, employees are trained and encouraged to seek out pollution prevention (P2) opportunities.

As Steve McKew, manager of Compliance Engineering at Northrop Grumman explains, “The success of our pollution prevention programs has focused on multi-disciplinary teams that have integrated P2 from our maintenance operations to the design of high-tech electronics. P2 has not only been good for the environment, but also has supported our business plan.”

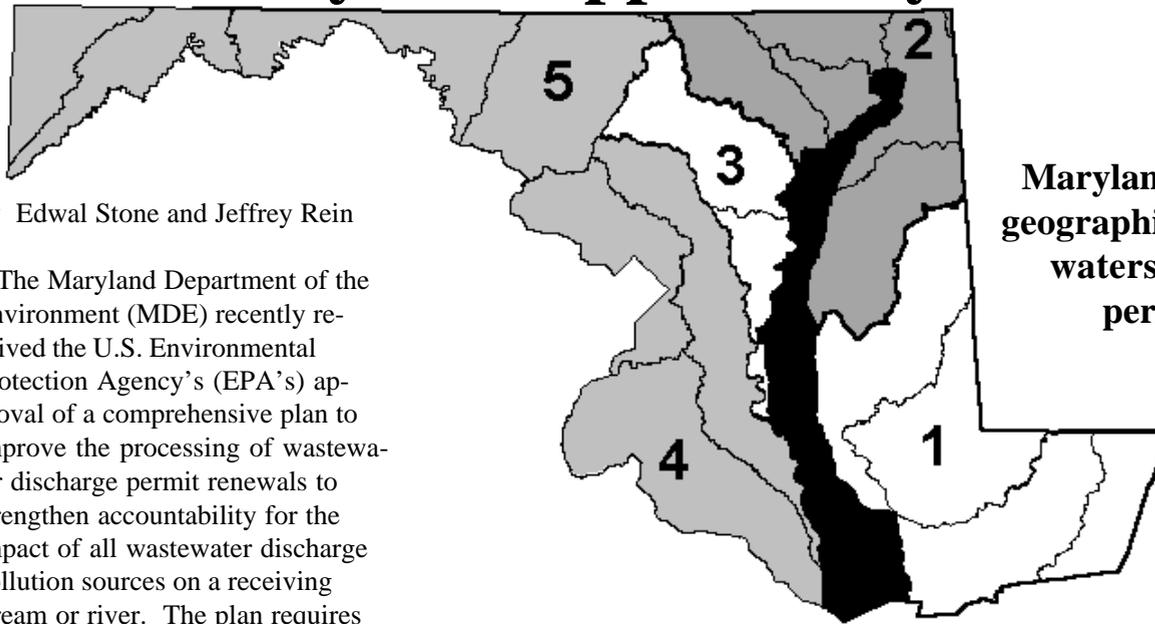
Northrop Grumman has been a member of *Businesses for the Bay*, a voluntary pollution prevention program, since 1996 and has also volunteered as a *Businesses for the Bay* mentor to help businesses prevent pollution. Other 1998 award winners were Parker’s Exxon in Washington, D.C. for the small business category, and Hercules Incorporated from Hopewell, Virginia for the medium-sized business category. For more information about joining *Businesses for the Bay*, contact MDE Pollution Prevention Coordinator Laura Armstrong at (410) 631-4119 or visit the website at www.chesapeakebay.net/bayprogram.



Maryland Tawes Award For A Clean Environment

Individuals and organizations are encouraged to submit nominations for the 1999 Tawes Award For A Clean Environment, co-sponsored by the Maryland Department of the Environment and the Maryland Petroleum Council. Eligible youth or adult applicants who are active in conservation, ecology, recycling, education projects, pollution prevention, or environmental emergency response may be nominated. Deadline April 15. Call MDE at (410) 631-3012 or the Maryland Petroleum Council at (410) 269-1850.

MDE's Watershed-Based Permitting System Approved by EPA



Maryland's five new geographic regions for watershed-based permitting.

by Edwal Stone and Jeffrey Rein

The Maryland Department of the Environment (MDE) recently received the U.S. Environmental Protection Agency's (EPA's) approval of a comprehensive plan to improve the processing of wastewater discharge permit renewals to strengthen accountability for the impact of all wastewater discharge pollution sources on a receiving stream or river. The plan requires that all wastewater discharge permit renewals within a watershed be considered during the same administrative cycle versus the traditional first-come, first-serve basis.

For watershed-based permitting purposes, Maryland has been divided into five geographic areas. To get each permit on cycle for its watershed, any permit with less than half of the effective period remaining when its watershed is being permitted will be processed early for reissuance with all of the other permits in the watershed. Other permits may be allowed to expire and then administratively extended (for no more than two and a half years) to come into cycle

with the other permits in the watershed group.

All permittees in the Lower Eastern Shore/Coastal Bays watershed, the first scheduled watershed, are being sent letters this month announcing the new permit renewal schedule. Permittees in the other four major watershed groups will be contacted later this year. MDE expects to have fully implemented these cycles by the end of 1999.

Not every application for a permit can be scheduled with its associated watershed. MDE will continue to give priority to new permits and to permit modification requests to meet the start-up needs of businesses or to address

significant environmental concerns.

The new watershed-based permitting system uses existing monitoring and sampling data being collected for determination of the Total Maximum Daily Loads required to protect water quality in Maryland's rivers and estuaries. Watershed permitting also will help position Maryland's point source regulatory control program to assist other State agencies in implementing the restoration strategies of the Clinton Administration's Clean Water Action Plan and Maryland's Smart Growth policies.

For more information contact the authors at (410) 631-3000.

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Environmental Indicators Report

Environmental Indicator's Report and commented on MDE's and EPA's proposed environmental performance partnership. The purpose of the environmental partnership between the three agencies is the development of a long-term, results based management plan that will improve the effectiveness of Maryland's environmental programs. The report gives a snapshot of over 40 public health and ecosystem protection indicators used to track progress on goals related to air and water quality, waste disposal and recycling efforts, lead poisoning prevention, Chesapeake Bay protection and restoration activities, wetlands and smart growth, among many others. An updated report will be distributed at the public meetings. The public is encouraged to attend one of the public meetings to share ideas and opinions about Maryland's environment and natural resources and discuss state and federal public health, environmental and natural resource protection activities. Persons needing special accommodations should contact MDE's Office of Fair Practice at (410) 631-3964. TTY via Maryland Relay call 1-800-735-2258. For more information about the public meetings, Maryland's Environmental Indicators or the Environmental Performance Partnership, please call (410) 631-4187 or visit MDE's website at www.mde.state.md.us.

America Recycles Day a Success

Florida Resident Wins American Green Dream House

by Virginia Lipscomb And Bonnie Berardelli

America Recycles Day, held November 15, was celebrated in Maryland through 41 separate successful public outreach activities. Nationwide, 2.15 million individuals from 38 states and two American territories pledged to improve their personal recycling efforts.

The Eastern Shore, and Montgomery and Anne Arundel counties held several household hazardous waste collections. Many counties produced proclamations from their county leaders to encourage citizens to pledge to do more for recycling. Others staffed community events where over 12,000 Marylanders completed the personal pledge card and entered to win the American Green Dream House offered by the America

Recycles Day national organizers.

The Maryland Recyclers Coalition organized and managed the Maryland Recycling Trail where public and privately owned material recovery facilities, the first stop for most curbside and drop-off recyclables, and recycling centers opened their doors for public tours. The "trail" then continued through ten of the more than two hundred businesses and industries that either recycle materials or utilize recycled materials in their products.

The American Green Dream House drawing winner was Lori McKee of Boca Raton, Florida, who pledged to buy more products with recycled content. The winner of the Walt Disney World trip for four was Cecil Roberts, a fourth grade student from Tyner, Kentucky.



Santa and some of Charles County's youngest recyclers joined "Blue Bin Bobbie" to help promote America Recycles Day during a parade in Charles County.

Protecting Water Resources:

Part one in a series to help you understand water regulations and programs

by Jim George

A large number of government and private organizations are working to preserve Maryland's water quality for future generations. With so many environmental partners, the network of ongoing statutory programs, voluntary agreements and interim initiatives is sometimes difficult to sort out.

The federal government sets the basic framework for protecting our environment. Federal laws, like the Clean Water Act (CWA), establish a baseline of nationwide protection which establishes a uniform climate for environmental regulation between the individual states. In addition to the major federal laws, state and local governments may adopt laws that provide additional protection.

Many of the federal environmental laws are carried out by Maryland State government, using federal and state funds, under delegated federal authority. Maryland's county and city governments have environmental protection functions in departments with titles such as "public works," "parks," or "licensing." Similar arrangements of authority delegation exist between Maryland and many local governments.

Within this framework, two major federal initiatives shape Maryland's water quality programs. The Clean Water Act, originally adopted in 1972 and administered by the U.S. Environmental Protection Agency, is the main federal law that addresses environmental aspects of water quality while the Chesapeake Bay Agreement, first signed in 1983 by Virginia, Maryland, Pennsylvania, District of Columbia and the U.S. Environmental Protection Agency, is a voluntary regional compact.

Although the roles of the Maryland Department of the Environment (MDE) and the Department of Natural Resources (DNR) have changed over the years, DNR currently oversees Maryland's involvement in the Chesapeake Bay Agreement, and MDE acts as the primary administrator of the Clean Water Act. Because the Bay Agreement is voluntary, and most provisions of the Clean Water Act are regulatory, these roles are consistent with MDE's responsibility as the state's environmental regulatory agency.

Overview of the Chesapeake Bay Agreement

The Chesapeake Bay Agreement has been amended several times since 1983, and is supplemented by numerous action-oriented regional directives. The most prominent initiative, the 40 Percent Nutrient Reduction Goal is being guided through each state's Tributary Strategy. This nutrient goal is linked to the more recent Riparian Forest Buffer Goal, which targets the establishment of 2010 miles of stream buffers by 2010 to help reduce nutrients and improve stream habitat.

The Toxics Reduction and Prevention Strategy builds on the 1987 Bay Agreement Amendments. This framework commits the states to a regional focus, conducting assessments, regulatory implementation, and to pollution prevention.

The Framework for Habitat Restoration initiative establishes fish passage goals to open 1,357 miles of spawning streams currently blocked by dams, Submerged Aquatic Vegetation goals for reestablishing underwater plants that promote the settling of sediments to improve water clarity and provide hiding places and other habitat, and a commitment to set goals for the reestablishment of oyster reefs.

The important role of wetlands were noted in the 1987 Amendments, and a commitment to "no net loss" was made in 1989. A wetlands initiative was then crafted to provide guidance to state and local governments. The 1997 Wetlands Protection and Restoration Goals was adopted to establish a

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US EPA Region III	www.epa.gov/region3
EPA Bay Program	www.epa.gov/r3chespk
US DOI	www.doi.gov
USDA	www.usda.gov
Army Corps	www.usace.army.mil
NOAA	www.noaa.gov

These popular web sites will give you the latest information on environmental issues in Maryland and across the nation.

series of steps leading to future quantified goals. Maryland has independently adopted a Wetland Recovery Goal of 60,000 acres.

Overview of the Clean Water Act

The Clean Water Act is a 1977 amendment to the Federal Water Pollution Control Act of 1972, which set the basic structure for regulating discharges of pollutants to waters of the United States. The law gave the EPA the authority to set standards for the quality of discharge effluents, which required the uniform adoption of certain control technologies for industry. Recognizing that those technologies might be insufficient to protect the water quality in every case, the law gave the EPA the authority to set water quality standards and to tailor or deny discharge permits to ensure that receiving water quality is protected. Many roles, such as setting

standards, permitting, administration, and enforcement are delegated to state governments with EPA oversight.

Various amendments to the law coincided with the evolution of managing and funding the control of pollution from point source discharges. However, recognizing that many pollutants are washed from the surface of land into the water, the 1987 amendment introduced provisions in the Clean Water Act guiding states to develop nonpoint source management plans, and makes available grants to implement those plans. Although the Clean Water Act does not give EPA authority to enforce nonpoint source plans, they may withhold grant funding for states that fail to develop and maintain these plans.

New Initiatives and Beyond

In recent years, the U.S. EPA has embraced a holistic approach to water quality management, applied to various sized watersheds. It is within this context that states are to develop total maximum daily loads (TMDLs), which specify the upper threshold for substances or stressors that a water body can receive and still meet water quality standards. Most recently, the EPA and USDA have initiated a Clean Water Action Plan to fulfill the original goal of the Clean Water Act and achieve "fishable and swimmable" water for every American. In addition to these initiatives, the Chesapeake Bay Program is undertaking the Chesapeake 2000 initiative to prepare future amendments to the Chesapeake Bay Agreement.

Look for part two of the series in the next issue of MDEnvironment.

Corresponding Federal and State Government Agencies and Key Environmental Roles	
Federal Government	Maryland State Government
U.S. Environmental Protection Agency (EPA) <ul style="list-style-type: none"> Water Air Solid Waste 	Maryland Department of the Environment (MDE) <ul style="list-style-type: none"> Water Resources Air and Radiation Waste Management
U.S. Department of the Interior (DOI) <ul style="list-style-type: none"> U.S. Geological Survey U.S. Fish and Wildlife National Park Service 	Department of Natural Resources (DNR) <ul style="list-style-type: none"> Maryland Geological Survey Fisheries and Wildlife Management Service State Forests and Parks
U.S. Department of Agriculture (USDA)	Maryland Department of Agriculture (MDA)

PG County Wins EPA Award

by Derek Winogradoff and Sherry Appel

The Prince George's County Government received the U.S. Environmental Protection Agency's (EPA) top award for National Storm Water Control Program Excellence for its pioneering Low-Impact Development program.

Low-Impact Development (LID) can be used by land developers as a less expensive alternative to current practices required under stringent Storm water management regulations imposed by the State and the County. By combining hydro logically functional site design (micro-management techniques) with pollution prevention measures, low-impact development can compensate for development impacts on hydrology and water quality. Its goal is to mimic runoff conditions that existed prior to development by managing runoff in small, cost effective, landscaped features located on building lots instead of being conveyed to a large treatment pond. Additionally, Best Management Practices (BMPs) are integrated into the site design at every juncture.

Since LID designs reduce the need for clearing and grading, require less impervious surface, and eliminate pipes, inlet structures and storm water ponds, site development costs can be reduced by as much as 25-30 percent, with corresponding cost savings in long-term infrastructure maintenance costs.

The Low-Impact Development approach also has been recognized by the Maryland Department of the Environment as an equivalent alternative to their proposed new design requirements. EPA has given the County a grant to develop a national LID guidance manual, which will be available early next year. EPA is currently investigating the County's LID program as an option for addressing the storm water portion of combined sewer overflows, prevalent in more highly developed, older urban areas.

For further information on Low-Impact Development, please contact Larry S. Coffman, Associate Director, Programs and Planning Division, Department of Environmental Resources at (301) 883-5839 or through E-mail at lcoffman@co.pg.md.us.

Lower Eastern Shore Tributary Team Reaches Out to the Public

by Christy Mills, DNR

"Good decisions," said Ed Ellis, chair of the Worcester County Planning Commission. "Decisions that promote a balance [economic growth and environmental protection], increasingly require decision makers who are aware of—who understand—and who continuously educate themselves on increasingly complex issues." The Lower Eastern Shore Tributary Strategy Team continues to further the public's environmental education so that important environmental decisions can be made by working around the clock to organize two public workshops this past fall to educate the public about what individuals can do to reduce nutrient pollution reaching the Chesapeake Bay.

The November symposium entitled *How Human-Based Activities Affect the Chesapeake Bay* focused on the effect of human-based activities on the waters of the Chesapeake Bay and was designed to give landowners information they can use about nutrient management products, practices and techniques to assist in Maryland's goal to reduce nutrients 40 percent by the year 2000. The agenda included work sessions on cover crops, precision farming and best management practices, Landowner Referral Service, homeowner practices with an emphasis on household products, lawn care and septic systems, and a special program for youth. Team Chair, Bill Bostian, greeted participants at the opening session and briefly described the purpose of the Tributary Teams. Mark Powell, editor of the *Delmarva Farmer*, represented the concerns of the local farmer as he spoke to the group.

"It was gratifying to see the number of individuals with an interest in making a difference who were willing to spend the day at our conference. Our speakers, facilitators and co-sponsor, the Lower Eastern Shore Heritage Committee, were simply fantastic to work with," said Phil Hager, chair of the steering committee. Over 140 participants attended the sessions offered, including representatives of youth groups and local high schools.

"As a resource manager, I have come to expect hearing 'the same old thing' at environmental workshops for the general public. This workshop



Presentations at the November symposium, *How Human-Based Activities Affect the Chesapeake Bay*, were designed to give land owners practical information to help protect water resources.

offered new and exciting information such as precision farming methods as well as practical down-to-earth tips for homeowners which I had never considered. Even if I was on the steering committee!" said Joan Kean of Somerset County

In December, Team members co-sponsored a symposium entitled *Environmental Principles for Golf Course Design and Management* to (1) share information and understanding of golf course design, management and environmental protection; (2) promote understanding of primary, local, state and federal environmental regulations that impact golf course development; (3) disseminate information about new and innovative practices in golf course design and management; and (4) identify common ground between the golf industry, government and local citizens through discussion of a set of voluntary habitat and water quality guidelines for golf courses in Worcester County and the Delmarva Peninsula. The model used to develop this document was a slim booklet entitled *Environmental Principles for Golf Courses in the United States*. These general principles have been endorsed by 22 national and regional organizations representing golf, the environment and government. Like the national model, the local draft was produced with significant input from and discussion among representatives of the golf course industry, resource

and regulatory agencies, and other professionals. To facilitate that, the county established a "working group" of eighteen individuals who met together to discuss and modify the first draft.

"Estuarine areas are particularly vulnerable to the effects of nutrient and sediment loading, which can be side effects of golf courses," said Katherine Munson, natural resources planner and lead organizer of the workshop. "Golf courses also require significant landscape disruption and groundwater withdrawal. Out of recognition of these potential effects, the county, under a grant from Section 319 and Coastal Zone Management, is developing guidelines for golf course development and management. The Section 319 grant enabled the county and the Lower Eastern Shore Tributary Team to provide an educational forum for the entire community—not just Worcester County's community, but the entire regional coastal community."

Over 100 people, representing the golf industry, the environmental consulting fields, local, state and federal government and citizens' groups, attended the symposium. The entire event was videotaped for broadcast on the local cable station. The Worcester County Planning Commission will consider public comments on the draft at their meeting in mid-December. They also may request that the guidelines be reviewed again by the working group. The finalized set of voluntary habitat and water quality guidelines that were discussed at the symposium will be printed and distributed to the public. Both workshops were supported through a Non-Point Source Program 319 grant from the EPA.

Team members have also been involved with development of a pilot project, the Lower Eastern Shore Conservation and Restoration Action Strategy under the Clean Water Action Plan. Team members have helped focus and encourage local resources and program implementation on high priority areas within the Lower Shore. Involvement has included outreach to watershed and community organizations. Team members also will be addressing opportunities for action plan funding in the future.