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Communications Workgroup Highlights

By Deborah Elliott

Members of the Chesapeake Bay Program (CPB) Communications and Education Subcommittee Communications Workgroup have been extremely active advancing media campaigns, placing exhibits at fairs and festivals and drafting the program's annual citizens report. These activities were discussed at the committee's most recent meeting at the Chesapeake Bay Program office in Annapolis, Md.

The meeting began with the announcement that Diana Esher, the program's deputy director, will serve as acting director for Bill Matuszeski, who recently retired. The meeting was then devoted to discussing progress made on ongoing initiatives and new projects.

Ongoing Initiatives

- **Media Campaigns:** The Communications Workgroup issued a press release about the increased number of active bald eagle nests and fledglings in the Chesapeake Bay watershed. The story was picked up by the CBS radio network, National Public Radio, Maryland Public Television, the *Washington Post*, the *Baltimore Sun* and other media outlets.
- **Community Awareness:** The Communications Workgroup participated in 12 fairs and festivals throughout the spring, in both Maryland and Virginia. One of these was the Baltimore Waterfront Festival, April 26–29. This festival in particular is a successful venue for the program because of its location and extensive sponsorship. It is expected that the festival will extend to 11 days next year, and the CBP is looking to combine exhibits

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Fort Detrick's Forestry Program Receives Four Awards

By Alison Cooley and Brian Feeney

Considering how many awards Fort Detrick's forestry program won this year, Fort Detrick is becoming Tree City, U.S. Army. The installation received the Tree City USA Award and the Tree City USA Growth Award, both given by the National Arbor Day Foundation; the Maryland PLANT (People Loving and Nurturing Trees) Community Award, given by the Maryland Department of Natural Resources (DNR); and the Gold Leaf Award for outstanding Arbor Day activities, given by the International Society of Arboriculture (ISA).

The awards were presented at a ceremony in Oakland, Md., hosted by the Maryland DNR Maryland PLANT Community Award Program on April 20. All four awards were accepted by Lt. Col. Jeffery Springer, chief of Fort Detrick's Safety, Environment and Integrated Planning Office, which oversees the installation's forestry program. Michael F. Galvin, supervisor of urban and community forestry at the Maryland DNR, nominated Fort Detrick for the award. "Fort Detrick, like many federal military installations in Maryland, takes its environmental mission very seriously and is a fine partner and notable steward of our urban forest resources," said Galvin.

These awards are an outgrowth of Fort Detrick's ongoing forestry program. It began in 1997 after the installation discovered that cattle from an agricultural lease area on post had severely damaged Carroll Creek, a tributary to the Monocacy River. The stream was fenced off, and a tree planting program was begun. Every Earth Day since 1997, installation personnel have joined with local volunteers to plant trees. On Earth Day 2001, members of the Chesapeake Bay Foundation also joined in, helping to plant 100 trees to join the more than 900 already planted. The

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Maryland/Virginia 2001 Legislative Update

The Maryland General Assembly had a busy legislative year, signing into law a total of 18 bills that will benefit the Chesapeake Bay. The legislature advanced its nationally recognized smart-growth initiative by creating a Special Secretary for Smart Growth, enacting a Community Legacy Program to promote neighborhood revitalization and enacting the Maryland GreenPrint Program to create a green infrastructure network.

In addition, bills were passed to address Maryland's blue crab population, fisheries management for 22 species of fish and hard-shell clams; nonindigenous species, including the mute swan; dredging; and water quality. A bill to establish a Maryland water trails development program and another bill to update delineations of submerged aquatic vegetation protection zones every 3 years did not pass.

The Virginia legislature was also environmentally active this year, passing 14 new laws benefiting the Chesapeake Bay. These laws were smaller in scope and not a furtherance of existing initiatives as in Maryland. A bill to expand the jurisdiction of the Virginia Chesapeake Bay Protection Act from Tidewater Virginia to all localities within the Chesapeake Bay watershed died in committee.

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Program Coordinators Share Success Stories at Third In-Progress Review Meeting

Chesapeake Bay Program coordinators representing 11 of the Bay installations, along with representatives from the U.S. Army Reserve and the U.S. Army Corps of Engineers, Baltimore District, joined together to describe their recent activities at the U.S. Fish and Wildlife Service's Patuxent National Wildlife Visitor Center in Laurel, Md., on May 15. It was the third Chesapeake Bay Program In-Progress Review (IPR) meeting organized by the U.S. Army Environmental Center (USAEC), and the largest yet.

Janmichael Graine, USAEC and the Army Chesapeake Bay Program coordinator, opened the meeting by pointing out that, while this was the third IPR meeting, it was the first one that included participants from all three states and the District of Columbia. He also shared highlights of the USAEC's accomplishments over the last two years. They include conducting federal facility site assessments at two Corps of Engineers facilities; cosponsoring a week-long conservation landscaping seminar with the U.S. Fish and Wildlife Service; developing two concept designs that resulted from students participating in the conservation landscaping seminar's field exercise at Fort Detrick; partnering with the Maryland Department of Natural Resources to conduct stream assessments at Maryland installations using the rapid stream assessment methodology; planting a BayScapes garden next to the USAEC building at Aberdeen Proving Ground (APG); designing and installing a BayScapes/Low-Impact Development demonstration project at Fort Lee; and teaming up with five other organizations to restore submerged aquatic vegetation (SAV) at APG.

Next, the installation Chesapeake Bay Program coordinators each shared the highlights of their accomplishments over the last two years. At Fort Indiantown Gap, Shannon Henry obtained a Chesapeake Bay Program grant and partnered with the Chesapeake Bay Foundation and The Nature Conservancy to plant 2,338 native plants and shrubs to reestablish forested streamside buffers, wetlands and grasslands. With the help of 275 local students, Cub Scouts and National Guardsmen, they completed the cantonment-area planting and then planted native trees along a trout stream on the installation.

Fort Monroe has also been creating forest buffers. Bob Anderson, U.S. Army Training and Doctrine Command and representing Fort Monroe, shared with the group efforts at the installation to create a quarter-mile of riparian forest buffer along Mill Creek. The installation would also like to convert concrete rip-rap along its shores to natural vegetation. Fort Monroe has been busy enhancing its water acreage, too. The installation created new SAV beds in 1998 and 1999, which are now monitored for new growth, and it has created new oyster reefs using a technique that employs floating reefs. Finally, the installation has been filling geotubes with sand to stabilize highly erodable areas of beach.

Fort Story also uses geotubes to stabilize its beaches. Johnny Noles told the group that the installation started using them in response to the damage caused by Hurricane Floyd. Thus far, the geotubes have resulted in no net loss of dune from flooding or wave action. He also informed the group that the cultural resources at Forts Story and Eustis have been mapped, and they can be accessed on the installations' Web sites. In addition, Fort Eustis has a $1 million shoreline restoration project underway. Rubble used to anchor the shoreline is being removed to form a breakwater. Natural vegetation will be allowed to grow in its place. The installation is also performing bird and bat surveys.

Fort Detrick has an ambitious reforestation and wetlands restoration program underway along Carroll Creek. Betty Boyland told the group that the installation has celebrated Earth Day for several years by planting trees along Carroll Creek with help from local volunteers. The installation is also working with its neighbor,

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The newsletter is distributed via U.S. mail and e-mail. It can also be viewed on the Army Chesapeake Bay Program home page. The home page address is <http://www.hqda.army.mil/acsimweb/env/cbi/index.html>. If you want to be on the distribution list, contact Brian Feeney, Horne Engineering Services, Inc., at <bfeeney@horne.com> or call (410) 515-5802.

Frederick Community College, and a contractor to remove invasive species, including multiflora rose and phragmities from wetlands along the creek and to replace them with native vegetation. The installation has also expanded the buffer area of the creek.

At the Aberdeen Proving Ground, Steve Wampler has begun a forest management plan modeled after its highly successful wetlands management plan. APG Natural Resources Branch staff is being trained to teach the qualified personnel course for forestry management, and APG is developing a forestry banking program. APG has also teamed up with the USAEC to manage its nearly 3,000 acres of SAV. The installation's management program has moved beyond transplanting SAV to improving water quality through managing the watershed to reduce upstream water quality impairments.

Tim Southard presented Fort A.P. Hill's activities. Fort A.P. Hill is the largest Army installation in the Bay watershed. It has 76,000 acres, 26,000 of which are used for live-fire exercises. Installation accomplishments include the completion of a wetlands inventory and assessment, completion of a digitized soils database and planning for two BayScapes planting projects to be completed in the fall of 2001 and in 2002. The installation has also completed a sediment and erosion control contract with an outside vendor and performed a surface water and stream system analysis of the Rappahannock watershed portion of the installation. The James River watershed portion will be completed next year. In addition, Fort A.P. Hill participates in the Business for the Bay program and has a 35-slide PowerPoint tutorial on environmental regulations, available on the Army intranet.

The final installation to report to the group was Fort Meade. Bill Harmeyer explained that the focus of the installation's recent efforts has been on conservation landscaping. The installation's conservation landscaping efforts include numerous innovative techniques. World War II–era parking lots, roads and ditches are being removed and replaced with natural vegetation. Stormwater ponds contain natural vegetation that doubles as wildlife habitat. Instead of spraying to control mosquitos, the installation relies on nematodes to act as a natural suppressant. A low-impact development (LID) demonstration area is also being prepared. LID techniques that will be featured include the use of rain barrels, pervious sidewalk surface material and the use of bioretention to control stormwater flow. The installation also annually obtains updated aerial photographs of its surface waters, including stormwater management ponds, organized by subwatershed. The photographs are digitized to form an overlay with other installation natural resource data layers.

IPR meeting attendees learn about the Patuxent Research Refuge's tertiary wastewater treatment system from Refuge Biologist Holly Obrecht.

Everyone was pleased to have the 99th Regional Support Command of the Army Reserve in attendance this year. The 99th is based at Fort Meade and controls over 400 Army reserve installations throughout Maryland, Delaware, Pennsylvania, Virginia and West Virginia. Joseph Effenger informed the IPR meeting attendees that the 99th's Environmental Division follows ISO 14001 protocols for hazardous substance auditing and is currently implementing a pollution prevention program for its facilities. Facility managers are trained to follow all applicable environmental regulations and the 99th's standard operating procedures. An Environmental Compliance Assessment System is used to track receipt, use, disposal and recycling of hazardous materials.

During the lunch break, time was made for the attendees to tour the Visitor Center tertiary water-treatment system. Holly Obrecht, refuge biologist, led the tour. He explained that, while primary treatment is used for density separation and secondary treatment is used for toxics removal and chlorine treatment, tertiary treatment makes wastewater suitable for discharge into a water body. The tertiary treatment methods used at the National Wildlife Visitor Center does even more. It consists of a set of shallow water-treatment ponds that permit gravitational flow of treated water from one pond to the next, with the water becoming cleaner in each one. The ponds accommodate emergent vegetation for plant uptake of nutrients and for habitat creation. Reptiles and amphibians have been observed using all of the ponds for habitat. Laboratory analysis of water treated in this system has consistently confirmed its efficacy.

The Future of Pollution Prevention

A two-day workshop, titled *Reaching Zero: The Future of Pollution Prevention,* will be held in Alexandria, Va., on Nov. 13 and 14. Cost is $75. For more information and directions, contact April Marcy at 410-267-5719 or <marcy.april@epa.gov>.

Fort Detrick Honored

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installation plans to eventually connect its isolated tree stands, measuring from 1 to 11 acres, to form a 50-acre tract of forest that can be connected to Frederick Community College's 50-acre tract. The combined tract will then form a large riparian forest that can tie into the Frederick Greenways Program, which has the goal of creating a continuous greenway from the Catoctin Mountains to the Monocacy River.

Betty Boyland, coordinator of Fort Detrick's natural resources, said that she sees the installation's forest program as an opportunity to create habitat for migratory birds, a haven to escape the summer's heat and a place where children can explore and learn about nature. Eventually, the installation plans to build an interpretive trail through this area.

Boyland said, "This effort to create new forests is part of our Forestation Plan, which has been incorporated into Fort Detrick's Master Plan and Integrated Natural Resource Management Plan. The Forestation Plan contains guidelines that are used to implement Fort Detrick's forestry program. Because of the development of the Forestation Plan, other plantings to increase wetlands, habitat improvements we've undertaken and the development of our Invasive Species Management Plan, we were able to apply for the Tree City USA Growth Award. All of this could not have been accomplished without the support of our [deputy installation] commander, Col. James Greenwood, and our Major Command, U.S. Army Medical Command."

Tree City USA Award

This is the second year Fort Detrick won the Tree City USA Award. The installation first became a Tree City USA on April 28, 2000. Fort Detrick received the awards because the community met the four necessary standards. First, the installation has a forestry department that is legally responsible for the care and management of the community's trees. With coordination and oversight from Fort Detrick's Natural Resources Office, the Directorate of Installation Services is responsible for the community's trees. Second, it has a community tree-care ordinance that has designated the establishment of a forestry department and given it the responsibility to write and implement an annual community forestry work plan. Fort Detrick has a community forestry work plan containing guidelines that are used to implement its forestry program. Third, it has a community forestry program with an annual budget of at least $2 per capita. Fourth, it held an Arbor Day observance and proclamation. On April 28, 2000, Fort Detrick hosted an Arbor Day celebration and 1999 Maryland PLANT Community Awards ceremony for the Western Region of Maryland.

Tree City USA Growth Award

Fort Detrick was presented with the Tree City USA Growth Award for demonstrating progress in its community forestry program in the categories of New Project or Organization, Wildlife Habitat, and Plans for Donations. Requirements for the New Project or Organization category were fulfilled by two planting events that Fort Detrick held in 2000, during which the installation partnered with Frederick Community College. One of the plantings was done as an Earth Day project. Riparian forest buffers were planted, and funding for the project was provided from a grant.

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Doug Valentine

Fort Detrick receives a Maryland PLANT Community Award at the green level at the Arbor Day celebration and 1999 Maryland PLANT Community Awards ceremony it hosted for the Western Region of Maryland on April 28, 2000. From left to right, in the front row: Lt. Col. Jeffery Springer, chief of Fort Detrick's Safety, Environment and Integrated Planning Office; Maj. Gen. John Parker, commanding general of U.S. Army Medical Research and Materiel Command and Fort Detrick; Betty Boyland, coordinator of Fort Detrick's natural resources; Col. James Greenwood, deputy installation commander of Fort Detrick; and Steve Parker, past chairman of the Maryland Community Forest Council.

Communications Workgroup

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with its many partners for impact and staffing purposes. Fair season extends through November.

- **CBP Subcommittee Presentations:** Rich Batiuk, associate director of science for the CBP, gave a presentation on the new criteria being used to determine water quality, which will no longer be determined by nutrients. The Communications Workgroup will be preparing a public information campaign to coincide with the release of the new criteria in the fall.
- **Information Products:** Drafting of the CBP's annual citizen report, entitled *The State of the Bay*, is underway. The report includes information on topics such as living resources, vital habitat, water quality, sound land use, stewardship and community engagement.

Special Projects

- **Meaningful Bay Experience:** Jim Firebaugh (Va. Dept. of Education), member of the CBP Communications and Education Subcommittee (CES), briefed the Communications Workgroup on a comprehensive educational program that CBP hopes to implement in school systems throughout the *Chesapeake 2000 Agreement* signatory states. The program, called "Meaningful Bay Experience," will educate school-age children about their environment. The program's many lessons throughout the students' education will encourage them to be life-long stewards of the environment.

Cap Strategies

Finally, Gary Waugh (Va. Department of Conservation and Recreation), CES chairman, announced that Virginia released its interim cap strategy for the Shenandoah and Potomac rivers for 60-day public comment on March 30. This is not an absolute strategy, but outlines the process by which a final cap strategy may be built. Lauren Wenzel, Md. Department of Natural Resources, announced that Maryland has also released its interim cap strategy. As an interim strategy, it does not specify load allocations. A copy of Virginia's interim cap strategy may be found at <www.dcr.state.va.us>. A copy of Maryland's interim cap strategy may be found at <www.dnr.state.md.us>.

Fort Detrick Honored

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The other planting was done to extend the installation's wetland area.

Two projects helped Fort Detrick meet the standards in the Wildlife Habitat category. The first was the addition of a no-mow area on the installation. Areas that are not mowed are beneficial to wildlife because they provide ground-nesting birds, such as meadowlarks, with a safe place to nest. The second was an Eagle Scout project. An Eagle Scout candidate built and installed 25 bluebird nest boxes on Fort Detrick.

Fort Detrick fulfilled the criteria for the Plans for Donations category by starting a program called Leave your Roots at Fort Detrick. Through this program, families have the opportunity to plant their live Christmas trees in a special area on Fort Detrick and receive recognition for their donation. A permanent marker identifying the name of the donor, the type of tree planted and the date of planting is placed next to the tree. Fort Detrick is currently making this area available to people who wish to donate a tree for someone who is retiring.

Maryland Plant Community Award

Fort Detrick won a Maryland PLANT Community Award at the green level in 2000 and 2001. The installation also received a Maryland PLANT Community Award at the gold level in 1999. The Maryland PLANT Community Awards program is cosponsored by the Maryland DNR – Forest Service and the Maryland Community Forest Council. The program aims to recognize communities throughout the state of Maryland that are actively involved in community tree planting and care.

The award program has bronze, silver, gold and green award levels. Applicants can receive a bronze-level award for a single project activity or a one-time event. Silver-level awards are awarded to communities that have formative programs and are beginning to develop an ongoing urban forestry program. Gold-level awards are given to communities that have developmental programs and are seeking activities in addition to those listed in the bronze- and silver-level award categories in order to improve the overall health of the urban forest. The green-level award, the highest award given, is presented to communities with sustained programs — programs that are organized, fully functional and funded, and that have full-time-equivalent technical assistance, continuity, support and budget.

Gold Leaf Award

Fort Detrick received a Gold Leaf Award in the category of Outstanding Arbor Day Activities. The International Society of Arboriculture, a scientific and educational organization with a mission to foster research and education that promotes the care and the benefits of trees, issued the award. The Mid-Atlantic Chapter of the ISA annually sponsors the Gold Leaf Awards, which are given to projects that demonstrate the goals of the organization's mission in an exemplary manner.

Fort Detrick is a U.S. Army medicine installation that houses the United States Army Medical Research and Materiel Command, the National Cancer Institute at Frederick and 36 other tenant organizations. The success of its forestry program serves as a model for its tenants and for federal facilities throughout the Chesapeake watershed.

Fort Meade Named Army Community of Excellence Award Finalist

By Denny Cox

Fort Meade now has $500,000 more for making installation improvements as a result of being named an Army Community of Excellence finalist. The installation also received a silver trophy and an Army Communities of Excellence flag.

Installation Commander Col. Michael J. Stewart and Installation Strategic Planning Officer Ted Hartman accepted the award from Army Vice Chief of Staff Gen. John M. Keane and acting Assistant Secretary of the Army for Installations Raymond R. Fatz at an awards ceremony in the courtyard of the Pentagon on May 3. More than 25 members of the Directorate of Logistics and Headquarters Command Battalion attended the ceremony.

In recognizing the award recipients, Gen. Keane said, "These installations took the challenge and have proved themselves to be truly communities of excellence." Maj. Gen. Van Antwerp, assistant chief of staff for installation management and host of the ceremony, added, "The installations recognized today are outstanding examples of stewardship. They are taking care of our most precious resource — the sons and daughters of America."

Denny Cox

From left to right: Installation Commander Col. Michael J. Stewart, Army Vice Chief of Staff Gen. John M. Keane, acting Assistant Secretary of the Army for Installations Raymond R. Fatz and Installation Strategic Planning Officer Ted Hartman shake hands at the Army Communities of Excellence awards ceremony at the Pentagon May 3. Fort Meade was named one of 10 finalists in the competition.

The Army Communities of Excellence program was established in 1988 to promote excellent facilities and services at Army installations worldwide. It provides installation leaders at all organizational levels a means for evaluating and improving readiness, operational performance and quality of life. Recognition of installation successes rewards good work and inspires other installations to emulate them.

Competing installations submitted a 50-page application, which was scored by a team of examiners. The examiners then performed site visits and produced a site-visit report for each installation, which was forwarded to a panel of judges for final evaluation. Ten finalists that best met the Army Performance Improvement Criteria were selected for recognition.

The finalist judged to be the best-improved organization and named the overall winner was XVIII Airborne Corps and Fort Bragg, N.C. The installation received $3 million for installation improvements. The eight other finalists were Rock Island Arsenal, Ill.; Wisconsin National Guard, Wis.; White Sands Missile Range, N.M.; 34th Support Group, Yongsan, Korea; Fort Rucker, Ala.; Fort McCoy, Wis.; the 417th Base Support Battalion, Kitzingen-Wuerzberg-Giebelstadt, Germany; and the 10th Area Support group, Okinawa, Japan.

Upcoming Conference on Low-Impact Development

On April 9–11, the Army will host a conference on low-impact development (LID) at the Fort Belvoir Community Club. A relatively new strategy, LID focuses on controlling stormwater at the source, using microscale controls such as bioretention, porous pavement and vegetated roof covers as opposed to the traditional, centralized method of control, dependent on large-scale treatment facilities. LID is not only more cost-effective, but also more aesthetically pleasing and less environmentally intrusive than conventional methodology.

Mr. Larry Coffman, associate director of plans and programs for the Prince George's County Department of Environmental Resources, and Mr. Neil Weinstein, executive director of the Low-Impact Development Center, will be key instructors for the conference. Over the course of three days, participants will attend a variety of seminars focusing on such topics as the basics of low-impact development, the need to reestablish and maintain natural processes and implementation of LID practices. In addition, conference members will have the opportunity to apply their newly acquired knowledge with hands-on field exercises that will allow them to identify LID opportunities and to develop concept designs for scenarios involving future development or urban retrofits.

For additional information, contact either Helene Merkel or Mark Wilson of Horne Engineering Services, Inc., by phone at (703) 641-1100 or by e-mail at <LIDWorkshop@Horne.com>.

FAC Highlights

Important FACts

Members of the Federal Agencies Committee recently met at the Chesapeake Bay Program Office in Annapolis. Announcements and discussion highlights follow.

A New Directive on Stormwater

Keely Clifford, U.S. Environmental Protection Agency, presented an update on the progress being made on the new Executive Council Directive on Stormwater. Although the Bay Program has made good progress in controlling point source pollutant discharges, data from the National Pollutant Discharge Elimination System Phase I monitoring show that urban stormwater loads are a significant and rising source of sediments and nutrients in the Bay. Urban lands contribute 16 percent of the total nonpoint sources of nitrogen, 27 percent of the nonpoint sources of phosphorus and at least 9 percent of suspended sediments to the Chesapeake Bay. Also, expanded development has increased such toxic pollutants as pesticides and metals because of increases in urban stormwater runoff. By 2005, the Bay Program estimates that, although pollutant loads from point sources and agricultural sources will be on the decline, urban stormwater pollutant loads may increase by as much as 2 to 3 percent.

The large size of the Bay watershed, as well as the limited amount of available resources to manage stormwater, necessitates a targeted approach to stormwater management. A number of counties in the region are expected to double in population in the next 20 years. Development associated with this growth will create more impervious surface area, which increases stormwater runoff and pollutant loading. Certain watersheds, such as the Potomac River, James River and Patuxent River, are particularly threatened by toxins and sediments transported from urban areas. In addition, at least 21 federally owned land parcels in the Bay watershed are currently listed on the Superfund National Priorities List for releases of chemicals causing fish advisories.

The Bay Program's *Chesapeake 2000 Agreement* called for a new directive, to be signed by the Executive Council in 2001, that addresses stormwater runoff from state-, federal-, and District of Columbia–owned land. The Bay Program's Urban Stormwater Workgroup, which has members from state, federal and local agencies, has developed a draft directive that develops stormwater management goals within the program. The draft directive calls for the development of a baseline inventory of all public lands within each jurisdiction and designation of areas for stormwater management. The draft directive states that by 2002, a joint state and Federal Highway Administration workgroup should be established to share innovative approaches to stormwater management. By 2003, each state transportation department would have to develop a protocol to evaluate stormwater management opportunities. Also by 2003, the draft directive calls for stormwater quantity and quality controls for all new development in the Bay watershed. Other goals include completing by 2006 at least 15 innovative stormwater demonstration projects on developed and redeveloped lands in these targeted areas and by 2008 reducing by 30 percent the Bay Program's chemicals of concern from public lands draining into the Anacostia River, Elizabeth River and Baltimore Harbor.

Saving the Bay: A Broad Look at Costs and Funding

Chuck Fox, Chesapeake Bay Foundation, presented estimated costs of achieving some of the major water quality and land conservation goals of the Bay Program partners. Three of the major goals are the removal of water quality impairments by 2010, the preservation of 20 percent of all land area in the Bay watershed by 2010 and the reduction of the rate of harmful sprawl by 30 percent by 2012. The achievement of these goals will likely require additional nitrogen removal from sewage treatment plants, more riparian buffers, more agricultural land conservation practices, better stormwater runoff management, increased wetland areas and increased oyster populations. A nitrogen load reduction of more than 100 million pounds per year will be needed to bring water quality in the Bay to an acceptable level.

The estimated cost for all of this work is $8.5 billion, which translates into approximately $850 million per year, combined, from all federal, state and local sources. He compared this figure with the costs of other large projects in the area, such as $2.2 billion for the new Wilson Bridge and the $9 billion a year spent on transportation improvements in the three Bay states.

In addition to the funding sources that Bay Program partners routinely use, Fox encouraged partners to seek funding from new federal sources that might cover a substantial portion of the total cleanup cost. In particular, the Clean Water Infrastructure Bill will authorize more than $15 billion over 5 years. Conservation programs may benefit from funds through the 2002 Farm Bill. The 2002 Water Resources Development Act could provide money for oyster recovery and sediment removal. Finally, the 2003 Federal Transportation Bill contains more than $500 billion over a 5-year period that might effectively be tapped for Bay restoration.

Fox suggested that Bay Program partners continue to work together to assess funding enhancements at all levels of government. In addition, the Bay Program should work with congressional delegations to evaluate legislative opportunities and seek new interests in the Bay to enhance public investment. To meet the ambitious goals outlined in the *Chesapeake 2000 Agreement*, partners need to begin now to develop new funding sources.

IC Highlights

Meeting Announcements

The most recent Implementation Committee (IC) was held at the Chesapeake Bay Program Office in Annapolis. Announcements and discussion highlights follow.

Community Watershed Task Force

Frank Dawson, chair of the Chesapeake 2000 (C2K) Watershed Commitments Task Force, presented recommendations for the Chesapeake Bay Program to address the C2K commitment to develop and implement locally supported watershed management plans in two-thirds of the Bay watershed. The task force made four major recommendations to the IC. First, it called for immediate action to commit to work on all relevant C2K commitments, using the umbrella of watershed management planning. The IC agreed to this recommendation and will work to ensure that all Bay Program subcommittees are working with community watershed groups as they address various C2K goals.

Second, the task force asked the IC to create a place in the Bay Program organizational structure for input from community watershed groups. Several options were discussed, including creating either an informal focus group or a permanent advisory group for local watershed concerns, delegating an existing advisory committee to address local watershed issues, or integrating local watershed representatives into existing subcommittees. Because of the preceived limits of local watershed groups' time and money, it was decided that the IC should strengthen efforts to reach out to them.

The third and fourth recommendations from the task force are to support creation of watershed management plans and groups and to create a permanent place in the Bay Program structure to address watershed management planning. Although it is recognized that the task force is itself currently filling both of these roles, the Bay Program will need to create long-term solutions as the task force is a temporary group that will no longer meet after April 2002.

Local Government Participation Action Plan

Patricia O'Bannon, chair of the local government advisory committee (LGAC), reported on the progress made on the current reevaluation of the Local Government Participation Action Plan. No funding for this reevaluation will be available until October 2001, but LGAC is proceeding with temporary staff support from the Northern Virginia Regional Commission. The commission is a planning organization that helps monitor Chesapeake Bay Program activities and their impacts on local governments.

The first step of the reevaluation will be to send a letter to local governments that introduces the Bay Program and outlines the *Chesapeake 2000 Agreement*. It is hoped that this step and future reevaluation efforts will increase communication and cooperation between the Bay Program and local governments. A draft of the reevaluation report will be made available for public review on August 23, 2001, with a final report scheduled for completion on December 31, 2001.

Maryland State Implementation Grants

Gwynne Schultz, of the Maryland Department of Natural Resources Coastal Zone Management Division, presented a summary report on the Maryland State Implementation Grants. Last year, Maryland spent more than $97 million to address Bay Program commitments, but only $2.4 million of this came from the Bay Program itself. Two-thirds of this funding was devoted to water quality, with the remainder divided between living resources, habitat, education and outreach. Nutrient management plans have been completed for 8,000 acres of land, and riparian buffer restoration work has protected numerous waterways.

Other significant efforts include projects such as agricultural best management practices (BMPs) for Maryland's farms, as well as shoreline erosion control and technical assistance to Maryland's tributary inspection teams. The Special Rivers Forestry Project works with farmers to develop and implement BMPs and forest management plans. Ms. Schultz stated that a major strength of the Bay Program implementation grants was the flexibility given to each state to administer the funds according to its own priorities. Much of Maryland's success can also be attributed to efforts to seek new ways to leverage funding.

Virginia State Implementation Grants

Jack Frye of the Virginia Department of Conservation and Recreation presented a report on the Virginia State Implementation Grant Program. He provided specific examples of Virginia's efforts to meet C2K goals and how these efforts are funded by Virginia and Bay Program grants. Virginia receives about $2.33 million per year from the Bay Program and provides more than $183 million per year in state funding to meet Bay Program goals. Most of this money is used to meet water quality commitments. Innovative programs that Virginia has funded include nutrient reductions for cropland, animal production systems, golf courses and lawns.

Virginia has also reached out to the public through workshops, demonstration projects and public forums on issues such as watershed protection and nutrient management. The Shenandoah–Potomac Rivers Nutrient Reduction Strategy has resulted in completing nutrient management plans for 225,000 acres of land, fencing off from cattle 228 stream miles, installing numerous animal waste management systems and protecting 13 miles of shoreline from erosion.

Innovative Technologies Web Page

Peter Slack, chair of the Innovative Technologies Task Force, presented the Innovative Technologies Web page,

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IC Highlights

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which can be found at <www.chesapeakebay.net/innovative.html>. The Web site includes a definition of innovative technology and a description of the task force activities. Web site users will be able to find a description of the newly proposed Innovative Technology Clearinghouse, which will list technologies that are uniquely related to Chesapeake Bay protection and restoration efforts. The clearinghouse will list technologies that are approved and commercially available, as well as describe promising technologies still under development. Staff time for maintenance of the clearinghouse is provided by the Nutrient and Information Management Subcommittee. An application for the Innovative Technologies Clearinghouse was also presented to the IC.

Environmental Justice Task Force

Kendolyn Hodges-Simons, cochair of the Environmental Justice Task Force, presented the final draft of the Environmental Justice Strategy for review by the IC. The strategy contains a series of objectives and specific actions to enhance environmental justice in all Bay Program activities. Specific actions in the strategy include increasing understanding and involvement in Bay efforts by low-income, minority and non-English-speaking populations, especially in schools. The strategy recommends developing new communication tools to reach out to these populations, as well as new school programs for both students and teachers. The strategy also calls for a series of forums on Bay issues to be held in association with historically black colleges and universities. Finally, the strategy calls for the development of a report by 2005 that defines the criteria to be used to characterize affected communities and a list of specific approaches for addressing these impacts.

Person in the News

Glenn Markwith Named New DoD Chesapeake Bay Program Coordinator

By Brian Feeney

Glenn Markwith spent much of his childhood in rural Westmoreland County in the Potomac River chasing crabs in the shallows with a floating basket tied around his waist. Back in the early 1960s, he could clearly see crabs at the bottom in waist-deep water, and crabs and SAV were abundant. Today, as the newly appointed Department of Defense Chesapeake Bay Program coordinator, he plans to help return the Bay's water quality and living resources to the conditions he enjoyed as a child, while emphasizing teamwork and the completion of practical projects at federal facilities throughout the watershed.

Above: *Markwith showing off the day's catch at age 11.*

Below: *Markwith showing off the day's catch at age 45.*

Markwith is not new to the Chesapeake Bay Program. He worked on Bay program initiatives in his most recent position as director of environmental programs at Patuxent Naval Air Station and as head of environmental planning and natural resources at Yorktown Naval Weapons Station. He has a B.S. in biology from Mary Washington College and served as an environmental planner/engineer in the U.S. Navy for more than 15 years.

One of the first tasks he plans to pursue is reestablishing the DoD Chesapeake Bay Quality Management Board, starting with an executive-level meeting with the Chesapeake Bay Program coordinators from each of the service branches. Markwith will also determine all the possible funding sources for new and current projects, both within the DoD budget and from grants available through nonprofit organizations.

He also has a keen interest in innovative methods of Bay restoration such as low-impact development, BayScapes and interagency watershed management projects beyond the fence line. He will encourage and pursue these methods, while emphasizing pragmatic results. "I'm a nuts-and-bolts kind of guy," he said, "and I'm interested in the projects a bit more than the politics. I think that's one area where we can all make a bigger contribution."

Markwith still lives on the water, with his wife and three children, at Gloucester Point, across from Yorktown on the York River, where he is now introducing his own children to the joys of crabbing and fishing in the Bay watershed. He said, "I credit my own father for my extreme compassion for the Chesapeake. As a working waterman for most of his 70-plus years, he has seen firsthand the continuous decline of this once great natural resource. When I told him I had recently accepted a new position as DoD Chesapeake Bay Program coordinator, he simply said, 'Go and make a difference.' Good Lord willing, I intend to do just that."

He welcomes comments and suggestions from anyone. Contact Markwith by phone at 757-444-3009, x386, or by e-mail at <markwithgp@pwcnorva.navy.mil>.

Legislative Update

(Continued from page 1)

Maryland

Smart Growth: Maryland further institutionalized its commitment to smart growth by establishing an Office of Smart Growth, with a cabinet-level secretary and 13-person subcabinet. The office will provide a single point of contact for local jurisdictions, real estate developers, nonprofit organizations and community associations to use in navigating smart-growth regulations and accessing the program's incentives. The office will also coordinate smart-growth goals with the rest of state government.

The Community Legacy Program establishes a five-member Community Legacy Board and an 11-member advisory committee within the Maryland Department of Housing and Community Development to oversee a continuing, nonlapsing fund that provides grants to community development organizations for neighborhood revitalization initiatives. The program is funded at $10 million for FY 2002 and is intended to support smart growth by helping to make city living an attractive alternative to moving to the suburbs.

The Maryland GreenPrint Program is funded at $35 million for FY 2002 and represents a major initiative to create a green infrastructure. The program enables the Maryland Department of Natural Resources (DNR) to acquire lands of high natural resource value through direct purchases, easements and grants to local governments and land trusts. The goal of the program is to create an integrated greenways network that links existing preserved areas to maximize their environmental value.

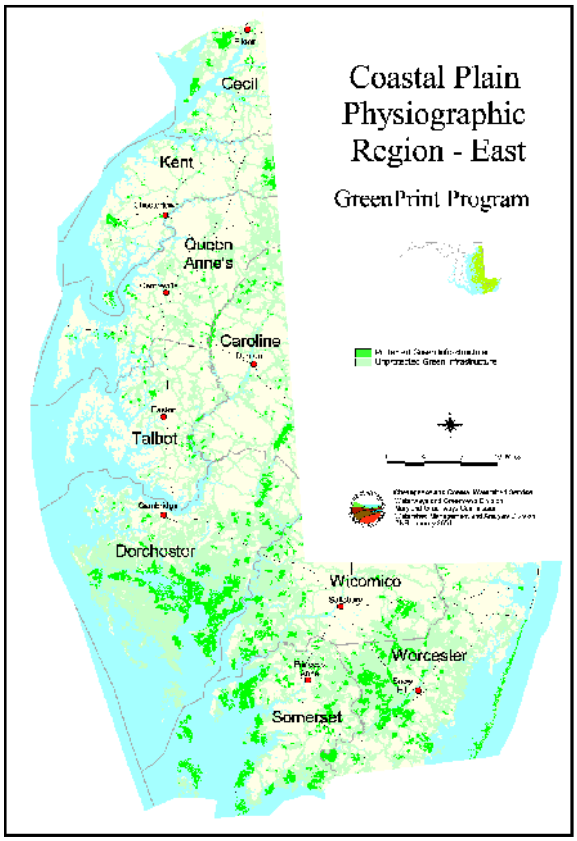
Maryland also passed the Maryland Agricultural Land Preservation Program. It requires the Maryland Agricultural Land Preservation Foundation to qualify farms of at least 50 acres as an agricultural district, thus conferring tax benefits and reducing development pressure. In addition, Maryland passed an income tax credit for the donation of perpetual easements to the Maryland Environmental Trust or the Maryland Agricultural Land Preservation Foundation. Finally, an income tax credit was also passed for "green" buildings, based on these buildings meeting energy-efficiency and environmental standards through the use of innovative design and technology.

Habitat Protection: Two bills reducing harvesting pressure on the Chesapeake Bay's crab population became law. The first authorizes the Maryland DNR to restrict the days that a commercial license holder may catch crabs. The second bill establishes a recreational crabbing license for people over the age of 16 using a trotline or more than 10 collapsible traps, eel pots or net rings, if they are not crabbing in a DNR–designated recreational crab area or on a private shoreline.

Another bill that was signed into law authorizes the Maryland DNR to prepare a fisheries management plan for 22 species of fish and hard-shell clams. The law requires the DNR to hold public hearings before changing regulations concerning these species.

The governor also signed a bill that corrects inaccuracies in an earlier law that specifies when and where power dredging for oysters may take place in Somerset, Calvert, St. Mary's, and Dorchester counties. The bill also requires each of these counties to establish an oyster sanctuary of no fewer than 100 acres.

Nonindigenous Species: Maryland passed three new laws intended to control nonindigenous species in the Chesapeake Bay. One requires the Maryland DNR to establish a program to control the population of mute swans through managed harvests. After five mute swans were introduced in 1962, their population expanded to 4,000. They destroy 10 million pounds of submerged aquatic vegetation a year. The second bill authorizes the DNR to prohibit the importation of nonnative crab species in the Chesapeake Bay, such as the green crab, Japanese shore crab and Chinese mitten crab. The third bill prohibits the DNR from issuing a permit for the release of any transgenic, or genetically altered, species of fish into any state waterway that connects to another waterway for



Through the Maryland GreenPrints Program, all important natural lands in the state have been mapped by region and by county. The example map at right is for the Eastern Shore region. Once existing protected lands are identified, additional corridors of conservation areas will be created, preserving an extensive, intertwined network of protected land. The GreenPrints Program is one way that Maryland is addressing its commitments in the Chesapeake 2000 Agreement *to protect 20 percent of the watershed and to reduce the rate of sprawl development by 30 percent.*

Maryland Department of Natural Resources

the next 5 years. The bill is in response to genetic alterations of fish species undertaken by the aquaculture industry to increase weight and growth rates.

Dredging: Passage of the open Bay dumping ban was one of the major environmental accomplishments of the 2001 Maryland legislative session. The Maryland Port Authority estimates that every year 4 million to 5 million cubic yards of material must be dredged from the Port of Baltimore and its approach channels to accommodate ocean-going container ships. The bill allows a total of 7.4 million cubic yards of dredge spoils to be dumped near Pooles Island, but prohibits dumping anywhere else in the Bay outside Baltimore Harbor. The bill also establishes an eight-member executive committee to provide oversight for a long-term dredge material management plan. The bill was the subject of heavy lobbying by both proponents of the bill and industry opponents, and the Pooles Island exception was the product of a painstakingly negotiated compromise.

A related bill establishes a Cox Creek Citizen Advisory Committee to monitor dredge spoil dumping in this Anne Arundel County tributary and to respond to citizen complaints. It also directs that a member of this board will serve as a liaison to the state Dredge Material Innovative Use Advisory Board. The Maryland Port Authority estimates that Cox Creek has a receiving capacity of 6 million cubic yards and wishes to dump 50,000 cubic yards a year. The bill is a response to an intense lobbying effort by members of the affected community.

Water Quality: Maryland passed two water quality bills. The first bill requires the owner or operator of any sanitary sewer system or wastewater treatment plant to report to the Maryland Department of the Environment (MDE), within 24 hours, any sewer overflow or treatment plant bypass that results in a discharge of sewage into surface water or groundwater. The initial phone call must be followed by a written report to MDE within 5 days. The second bill provides enabling legislation to Anne Arundel and Calvert counties to proceed with a prohibition on the construction of stormwater management systems in residentially zoned areas when the stormwater is generated by a commercial or industrial zoned area. The restriction only applies to residential areas located within a half-mile of the Chesapeake Bay and its tributaries.

Virginia

Water Quality: Virginia signed into law a bill requiring anyone discharging any hazardous or deleterious substance into state waters to notify within 24 hours the State Water Control Board, the director of the Department of Environmental Quality or the coordinator of emergency services for that locality. Previously, only individuals required to obtain a discharge permit were subject to a notification requirement.

Another new law directs the State Water Control Board to promulgate regulations to control discharges into all waters of the commonwealth from all boats. These regulations explicitly prohibit the discharge of untreated sewage. A third law requires operators of commercial vessels to file a ballast water control report form with the Virginia Marine Resources Commission.

The Virginia Pollutant Discharge Elimination System (VPDES) permit program was expanded this session. Currently, only applicants for permits to discharge sewage to surface impoundments must certify that the activity conforms with local zoning requirements. The new law requires applicants for permits to discharge sewage, industrial wastes or any other form of waste into state waters to provide this certification. Another new law adds an exemption to the VPDES permit program. The law grants a waiver from the requirement to file a closure plan to already permitted private sewage facilities that discharge less than 5,000 gallons of effluent a day.

Virginia also passed a law requiring anyone engaging in land-disturbing activities to obtain a certificate of competence from the Board of Soil and Water Conservation as a prerequisite for approval of an erosion and sediment control plan. Finally, the Virginia Water Quality Improvement Grant program was expanded to include eligibility for local governments pursuing point and nonpoint source pollution prevention projects.

The Chesapeake Bay: A new law requires the Virginia secretary of natural resources to submit an annual report to the Virginia House and Senate, specifying progress made toward implementing the provisions of the *Chesapeake 2000 Agreement*. Another new law commissions the Virginia Institute of Marine Science to prepare a management plan for shallow water areas of the Chesapeake Bay and the tidal portions of its tributaries. The focus of the plan will be submerged aquatic vegetation restoration.

Fish and Shellfish Management: A new law prohibits using without a permit hydraulic dredges for harvesting clams. Another new law establishes a recreational eel license, with a limit of two eel pots per licenseholder.

Forest Management: The Preservation of Important Farmlands Act, passed last session, which requires state agencies to evaluate the impacts of their actions on farm and forest land, was expanded. The secretaries of commerce and trade and natural resources are now urged to submit their impact analysis report to the General Assembly. The bill also requests that these secretaries and the Board of Forestry review the report annually and make recommendations to the governor and General Assembly on any initiatives or actions that will enhance the health of Virginia's forests. Finally, a law to extend scenic river designation of the Staunton River from 10.8 miles to 40.5 miles was passed.

Recycling: Virginia established a statewide recycling program for motor oil, oil filters and antifreeze this year. Sellers of these products must either accept them for recycling or post a list of recycling locations. The state will maintain a recycling Web site and mount a public outreach program.

State of the Bay

Mussel Watch Project Looks at Bay Sediments and Bivalves

Chemical contamination in the Chesapeake Bay has long been known to affect the reproduction, development and survival of living resources such as fish, shellfish, crabs, worms and grasses. The latest information on this threat was presented at the May 31 Implementation Committee meeting.

Dr. Adrianna Cantillo of the National Oceanic and Atmospheric Administration presented a report on the Mussel Watch Project, which monitored sediments and mollusks in the coastal waters of the United States, including the Chesapeake Bay, to determine the extent and trends of chemical contamination over time. The Mussel Watch Project is part of NOAA's National Status and Trends (NS&T) Program, which is managed by the Center for Coastal Monitoring and Assessment.

The Mussel Watch Project consists of 280 monitoring sites nationwide, with 15 sites in the Chesapeake Bay. Monitoring sites were selected to avoid small-scale areas of high concentration, or "hot spots," and to coincide with historical monitoring sites, such as EPA's Mussel Watch sites established during the 1970s. Between 1986 and 1995, sediments and bivalves were collected at each of the 15 locations. These samples were sent to a testing laboratory and analyzed for organic and metal contaminants.

Only oyster data were used to compare nationwide levels of bioaccumulated silver, copper and zinc to the Chesapeake Bay data because these particular trace elements are much more concentrated in oysters than in mussels. Other heavy metals such as chromium, nickel, arsenic, selenium, cadmium, mercury and lead were compared with the nationwide data for both mussels and oysters, as were organic compounds.

Chesapeake Bay data were compared to the NS&T median and 85th percentile values. Concentrations above the 85th percentile are in the highest 15 percent of measured concentrations nationwide: areas with these concentrations are considered to be highly contaminated.

In the northern part of the Bay, many metals and organic compounds were present in oysters and mussels at higher concentrations than the nationwide 85th percentile. Levels higher than nationwide averages were also found near Hampton Roads and the James River, as well as at the Mattox Creek site on the Potomac River and the Ross Rock site on the Rappahannock River. The high concentrations found in the northern and southern parts of the Bay may reflect human population levels along Bay shorelines, particularly in Baltimore and Norfolk.

Concentrations of nickel in bivalves and sediments were found to be above the national 85th percentile throughout the Bay, possibly because of the natural mineral composition of the region. The study also determined that levels of sediment contamination found near Baltimore Harbor pose a significant risk to aquatic life.

When data were evaluated for trends, the most common result was a finding of no trend. Decreasing trends outnumbered increasing trends. Overall, the Mussel Watch Project found that environmental conditions in the Chesapeake Bay are good and, in some instances, improving.

Corps Hosts Chesapeake Bay Watershed Workshop

If Fredrik Wiant has his way, some day people who work at federal facilities will be able to bicycle to work, shower when they arrive, eat lunch under trees in a park-like setting next to their building and be able to stroll over to nearby wildlife habitat areas to observe nature.

This was all part of a larger vision of sustainable development that Wiant, an installation planning specialist with the U.S. Army Corps of Engineers Headquarters, and other speakers shared with 75 attendees at a Baltimore District Planning Division workshop entitled "Chesapeake Bay 2001 — Integrating Environmental and Facility Management to Create Sustainable Facilities." It was held June 4 and 5 at the National Wildlife Visitor Center at the Patuxent Research Refuge in Laurel, Md.

Federal facility environmental managers, public works and grounds maintenance personnel and contractors in attendance listened to speakers from the Corps, the Environmental Protection Agency (EPA) and other federal agencies describe a shift in facility management philosophy from designing to accommodate cars to designing with nature to reduce dependence on cars, reduce energy use and protect natural resources.

Workshop topics included an overview of ongoing efforts and tools to improve watershed management; achievement of sustainable facilities, including "greening the government" initiatives; Executive Order requirements; and improved stormwater management techniques through the use of low-impact development techniques. Speakers presented case studies in which institutional impediments were overcome and practical results were achieved.

The workshop is part of the Corps' continuing effort to provide leadership in environmental stewardship, habitat protection and ecosystem restoration. For more information on sustainable development, visit the Low-Impact Development Center Web site at <http://lowimpactdevelopment.org>, the American Planning Association Web site at <http://www.planning.org> and the EPA Office of Water Web site at <http://www.epa.gov/owow/nps/urban/html>.