



January/February 2001

# The Army's Chesapeake Review



## Military Installations Have Stories to Tell

by Don Maglienti

Imagine a story that begins with ancient geological processes, ecological rarity, and natural beauty. The story continues for 13,000 years of human evolution. It eventually involves Native Americans, early European colonists, bold exploration, the development of entire cultures, politics, war, and economic prosperity. The story then tells of recreational pursuits and environmental stewardship in a rapidly changing society, and leaves you standing in the very spot where all of this occurred. This is the story of the Chesapeake Bay, as told by the Chesapeake Bay Gateways Network. The Gateways Network is a program coordinated by the National Park Service to help people understand and appreciate the Bay's resources by making them easier to access. Military installations, as stewards of many of the Bay's natural, cultural, historic, and recreational resources, are uniquely appropriate to participate in this effort.

Designated sites in the Gateways Network provide people with an experience that includes Bay-related themes such as natural systems, transportation and settlement patterns, and military history. The military, which already shares a long history with the Chesapeake, can enhance its stewardship role and its partnership in the Chesapeake Bay Program by participating in the Gateways Network. Installations containing sites with historical significance, valuable fish and wildlife habitat, or nature trails can have these sites nominated for inclusion in the Network. The Chesapeake Bay Program's 1998 *Federal Agencies Chesapeake Ecosystem Unified Plan* commits federal partners, including the Army and other Department of Defense (DoD) partners, to increase public

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Shana Bullock

Canada geese rest on the shore of Burba Lake.

## Fort Meade Renovates Burba Lake

by Shana Bullock

As part of a continued commitment to improve natural resources in the Chesapeake Bay watershed and enhance quality of life for its soldiers and personnel, Fort Meade has been making improvements to Burba Lake, an 8-acre reservoir on post. The popular recreational area sits on Franklin Branch, a tributary to the Little Patuxent River, and provides habitat for a variety of wildlife. The lake and surrounding land form Burba Park,

which is used for fishing, walking and other outdoor activities. In 1999, Fort Meade dredged Burba Lake to reduce the sediment that had been building up over the years from eroding streams and reservoir shoreline. Fort Meade hoped to improve aquatic habitat in the lake and ultimately the Chesapeake Bay by removing the pollutants and nutrients in the sediment that can choke the life from a waterway.

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## Marine Corps Base Quantico Master Plan Responds to Growth Pressures

by Brian Feeney

Marine Corps Base Quantico is experiencing increasing internal and external growth pressures because of its proximity to Washington, D.C. In response, the installation's Facilities Division contracted to have a master plan and an architectural plan developed in the late 1990s. Now it has a plan that is updated every three years and is

electronically available to the Facilities and Public Works staffs. The plan presents a graphical interface of the entire base showing natural constraints to new construction and allows users to zoom in, select buildings and floor plans, and view schematic plans for future buildings and facility alterations.

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## Marine Corps

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Marine Corps Base Quantico is a 60,000-acre facility that was acquired in 1917 for combat training. It is dominated by Georgian redbrick architecture built in the 1920s and 1930s. Its infrastructure was built in the 1920s and has not been upgraded. Its land area is 97 percent undevelopable because of the need for expanses of range in which to conduct combat training. The base is bisected by I-95, with the main base to the east containing most of its buildings, and a much larger range area to the west, which also contains the FBI Academy and a Drug Enforcement Agency training center.

The base is being enveloped by the southward advance of sprawl from the Washington metropolitan area. In particular, development along Route 610 to the south has resulted in large volumes of commuter traffic moving through the roadways in the range area. Quantico is also experiencing pressure to accept additional federal facilities in its range area and to accept new roadways to alleviate commuter traffic congestion in the Stafford County area. The internal road network is also overburdened. Traffic regularly backs up from the main gate to I-95 during the morning rush hour.

One of the central goals contained in the plan is to establish a new area for intensive development on 171 acres near the FBI Academy. This area is already of limited training value because of the presence of the academy and offers the base an opportunity to install a modern infrastructure. As it is built out, activities housed in the main base will be moved to this new area so

that space can be opened up on the building-saturated main base and the traffic congestion around the main gate can be alleviated.

Altering the mix of activities located at the main base creates the opportunity for it to become a dedicated living area for base personnel. It is proposed that the main base will include housing, restaurants, healthcare, places of worship, and recreation facilities in a concentrated area. The Base Exterior Architectural Plan also provides for new buildings to reinforce the sense of place established by the area's Georgian architecture by following façade guidelines in each new structure, as well as streetscaping that adds to its attractiveness and a pedestrian orientation.

Another area of concern to be addressed through the master planning process is traffic. Ideas developed in the plan include creating satellite parking linked to a shuttle service and offering employees mass transit passes to encourage increased use of the base's railroad station. New road construction is considered an undesirable option because it parcelizes the range area. In the range itself, the plan calls for constructing 26 miles of raised gravel tank trails to prevent soil and stream bank erosion.

A major initiative for the main base is the creation of the Marine Corps Heritage Center close to U.S. Route 1. It will serve as the national Marine Corps museum, housing artifacts and exhibits. It will also house an IMAX theater, a parade ground, and a heliport to support demonstrations, parades and concerts. A major challenge is to incorporate green design concepts for the building footprint, 800-car parking

lot and parade ground to minimize the amount of impervious surfaces. The Facilities Division wishes to incorporate low-impact development concepts, such as integrating storm water management into the landscape and creating rain gardens. Quantico's Contracting Division uses Quality Based Selection, allowing it to reward bidders for including sustainable design elements. The Director of the Facilities Division has invited the Chesapeake Bay Program's Federal Agencies Committee to make experts available in order to further advance their green development strategy.

Although funding will limit the pace at which the plan is implemented, the plan gives the Marine Corps a map of the future so that they can best use their land and resources to fulfill their combat training mission. The successes and challenges encountered along the way will provide lessons learned for other Chesapeake Bay military installations.

### Earth Day 2001 Ideas

Earth Day is April 22. The U.S. Army Environmental Center (USAEC) has provided ideas for Earth Day projects that installations could undertake. Why not build a worm farm with children and teach them about composting, or provide the public with information on using environmentally safe solutions for cleaning house? Fact sheets about these and other ideas are available on the USAEC Web site. Just go to <http://aec.army.mil/> and click on Earth Day to find out more information. The Army Earth Day 2001 poster can also be ordered online.



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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.htm>. If you want to be on the distribution list, contact Alison Cooley, Horne Engineering Services, Inc., at [acooley@horne.com](mailto:acooley@horne.com), or call (703) 641-1100.

## FAC Highlights Important FACTs

The Federal Agencies Committee (FAC) of the Chesapeake Bay Program (CBP) met on Jan. 11 at the Marine Corps Base Quantico. The meeting highlights are as follows:

### GAO Report to Congress

Kyle Zieba of the U.S. Environmental Protection Agency (USEPA) Region III reported on the conclusions of a newly released General Accounting Office (GAO) report to Congress on the federal government's role in local growth issues. GAO surveyed city and county government officials from five major metropolitan areas. They were asked to identify growth-related challenges, the tools and techniques they use, and the opportunities and barriers presented by federal government regulations and programs.

The major challenges they identified are supplying water and wastewater infrastructure to keep pace with new growth, developing a tax base to match the services required by new growth, coping with increased traffic and addressing economic decline in their downtowns and loss of open space and natural resources to sprawl.

The tools that they identified as helping them respond to these problems are updating planning and zoning regulations, developing financial incentives to developers to place growth in areas better suited to accommodate it, and acquiring open space.

According to the respondents, the biggest barrier to effective planning for growth caused by the federal government is that federally funded infrastructure and transportation projects do not take local growth impacts into account. The respondents also said that the federal government's affordable housing funding programs do not offer local governments enough flexibility to use new housing as in-fill. They also pointed to a lack of coordination among government agencies in addressing the multifaceted problem of urban decay, sprawl and transportation. They said that federal funding to preserve

farmland and open space is ineffective because it offers no guidance on how to protect it, no incentives, and no consequences for not protecting it.

The report concludes by making several recommendations. First, the federal government should promote greater consistency between land use goals and transportation planning. Second, the federal government should consider the growth implications of federally funded infrastructure projects. Third, the federal government should promote in-fill development and provide incentives for local governments to manage growth through "smart growth" practices. Finally, it recommends that the federal government establish a leadership role in the preservation of farmland and open space, and provide education and training to local government on how to use federal programs designed to promote preservation.

### U.S. Postal Service Survey

Sharon Marsh of the U.S. Postal Service (USPS) presented results of a survey of post office septic systems located in the Chesapeake Bay watershed. Data were available for all but the Capital District, and the response rate was 98 percent. USPS found that of the approximately 4,000 post offices in the watershed, 58 percent have municipal sewer service and 42 percent use a septic system, holding tank, sewage treatment unit or outhouse. Eight percent reported having septic system problems. USPS also found that it owns less than 5 percent of its post offices; the rest are leased. The report recommends that USPS establish a maintenance priority list based on the report data, include septic system review in its 5-year maintenance plan, and coordinate with its lessors to ensure that septic systems properly function and are maintained.

### Bay Partners Facilities Program

Aileen Smith, DoD Chesapeake Bay Program coordinator, reported on the Bay Partners Facilities Program application, her last report in that capacity before leaving for a 1-year assignment to the Cooperative Ecosystem Studies

Unit at the Department of the Interior. She said that she and Helene Merkel of Horne Engineering had adapted the existing Local Government Advisory Committee form. She added that she was still not sure if the program should have one generic form or a form customized to each of the participating federal agencies. She will be soliciting comments from FAC members up until she leaves, then pass her responses on to Helene Merkel. The FAC discussed continuing the practice of including 2' x 2' metal signs as part of the award given to each installation, and discussed whether to have one central award ceremony or individual award ceremonies at each installation. No final decisions were made.

### Chesapeake Bay Restoration Act

Peter Marx, associate director for communications at USEPA's Chesapeake Bay Program Office reported on an item of clarification in the Chesapeake Bay Restoration Act of 2000. Section 117(f)(3)(A) on budget coordination states that, "as part of the annual budget submission of each federal agency with projects or grants related to restoration, planning, monitoring, or scientific investigation of the Chesapeake Bay ecosystem, the head of the agency shall submit to the President a report that describes plans for expenditure under this section." He said that he understood this provision to mean that federal agencies are required to report only those expenditures made directly in support of the Chesapeake Bay Program rather than expenditures that indirectly support the CBP, and that would have been made anyway. He added that the Office of Management and Budget (OMB) has not prescribed any specific reporting format and that this information is not one of OMB's key concerns.

### Quantico's Master Plan

Colonel Mark Swanstrom, director of facilities at Quantico, and Commander Cynthia Ebert presented Quantico's master plan. The plan was developed to respond to growth pressures both within the base and from the

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## Important FACTs

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suburbanization of Northern Virginia around it. The plan is stored electronically and is accessible by personal computer to Division of Facilities and Public Works staff. Highlights of it include developing an industrial park near the existing FBI academy west of I-95, using up-to-date infrastructure, applying some new urbanism concepts to the main base east of I-95 where personnel are housed, and creating the Marine Corps Heritage Center to serve as a national Marine Corps Museum and tourist attraction.

## Fort Meade

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For the second stage of the Burba Lake improvements, Fort Meade is planting native flowers, shrubs, and trees in the shallow waters around the lake. Prior to the planting, the littoral shelf and shoreline around Burba Lake had little native vegetation as a result of the dredging project and overgrazing by resident Canada geese. The native plants will stabilize and protect the shoreline, decrease the amount of sediment entering the lake, enhance aquatic habitat, and improve aesthetics. In the fall of 2000, Fort Meade installed 9,000 herbaceous plants and 200 trees and shrubs in plots covering about half of Burba Lake's shoreline. Species planted include buttonbush, sweet pepperbush, hibiscus, duck potato, lizard tail and swamp milkweed, among other natives. To protect the young growth from the resident Canada geese, Fort Meade installed temporary fencing around the perimeter of each planting. Fishing line hung over the plantings will discourage geese from entering the fenced areas from the air. In the spring of 2001, Fort Meade will complete the initial restoration effort by adding water lilies to the shoreline plantings.

Fort Meade plans to monitor the new plantings over the next few years to determine which species thrive along

the Burba Lake shoreline. Once the plants establish themselves, the temporary fencing will be removed and Fort Meade will record species that are most resistant to pressures from Canada geese and other waterfowl. Fort Meade hopes that the native plants will spread, providing stabilization and wildlife habitat around the entire shoreline.

Future Burba Lake shoreline restoration efforts will focus on areas that remain denuded, and will be based on information collected from this effort.

For more information about this project, contact Bill Harmeyer at Fort Meade. He can be reached by phone at 301-677-9168 or by e-mail at <harmeyerw@emh1.ftmeade.army.mil>.

## Vincent Leggett Recognizes Contributions of African Americans

In honor of Black History Month, *The Army's Chesapeake Review* is paying tribute to Vincent O. Leggett, president of the Blacks of the Chesapeake Foundation, Inc. According to the organization's literature, Leggett has been documenting the contributions African Americans have made and are making in the maritime and seafood processing industry since 1984. "The Foundation shares black achievements, fosters preservation of the environment and facilitates the economic success of the Chesapeake Bay maritime trades and seafood processing industries," its literature reads.



J. Henson

*As Vincent Leggett leans against pilings on a pier at Annapolis City Harbor, he reflects on how African Americans have impacted the seafood industry.*

In addition to Leggett's involvement with the Blacks of the Chesapeake Foundation, he is the author of two books, *Blacks of the Chesapeake* and *The Chesapeake Bay Through Ebony Eyes*. He is also a member of the Chesapeake Bay Program's Environmental Justice Task Force. Leggett is currently pursuing a doctoral degree in American Studies at the University of Maryland in College Park and has a master of science degree in administration from Central Michigan University, as well as a bachelor of science degree in urban planning and community development from Morgan State University. Leggett is the special projects coordinator for the Maryland Department of Natural Resources, unit of Education, Bay Policy and Growth Management. For more than 25 years, Leggett served the public by working with the Anne Arundel Community College, the Anne Arundel and Baltimore City Public Schools and the Anne Arundel County Housing Authority.

For more information about the Blacks of the Chesapeake Foundation, Inc., write to P.O. Box 3576, Annapolis, Md. 21403, or contact Vincent Leggett by phone at 410-260-8744 or e-mail at <vleggett@dnr.state.md.us>.

## IC Highlights Meeting Announcements

The Implementation Committee (IC) met on Jan. 25 at the Chesapeake Bay Program Office in Annapolis, Md. Highlights from this meeting include:

### Non-Structural Storm Water BMPs

Ken Pensyl of the Maryland Department of the Environment presented a new storm water management approach using non-structural best management practices (BMPs). He emphasized the need to measure the effectiveness of existing BMPs both qualitatively and quantitatively to identify the best design for environmentally sensitive areas. He also highlighted the need for local governments to assist with the implementation process. Examples of potential designs included green rooftops and grass parking lots for urban areas, as well as rain gardens and similar landscapes for suburban areas. For more information, view the Maryland Department of the Environment Web site at this address: <<http://www.mde.state.md.us>>.

### Monitoring Subcommittee Report

Carlton Haywood, chair of the Monitoring Subcommittee, presented an update on the progress made in restructuring the Monitoring Subcommittee. He stated that they are very close to completing this task and presented recommendations for future monitoring efforts. These recommendations include basing monitoring efforts on the Chesapeake 2000 report and not changing the existing program until the current data can be analyzed and the data's usefulness determined. Additional recommendations are to incorporate new technologies into monitoring efforts (this might include using remote sensing, automated sampling, and snapshot cruises like those being done currently in the Bay). To fulfill commitments of the Chesapeake Bay 2000 Agreement, an increase in funding for monitoring efforts is needed. Priorities for water quality monitoring in tidal areas include the following:

- 1.) Water quality assessment of chlorophyll *a*, dissolved oxygen and clarity in all designated use areas

- 2.) Biological monitoring to include submerged aquatic vegetation (SAV), benthos, and plankton conditions;
- 3.) Monitoring that diagnoses causes of non-attainment, particularly within the watershed;
- 4.) Monitoring for nutrients, sediments, chlorophyll *a*, dissolved oxygen, and clarity to be used in water quality models; and
- 5.) Monitoring of toxins.

Haywood also noted that in the effort to save money under the existing mainstem monitoring program, only a reduction in the number of cruises can cut costs. Reducing the number of parameters tested will only result in a loss of information without a significant reduction in overall cost.

### Chesapeake 2000 Strategies

Several representatives presented strategies of the Chesapeake 2000 Agreement regarding preserving wetlands, reviewing tax policies, limiting impervious cover, and identifying and aiding in the creation of community watershed organizations.

- Karin Bisland of the Chesapeake Bay Program presented strategies for meeting the goal of having wetland preservation plans for all watersheds by 2010. This would include identifying key wetlands, establishing a database, assessing existing wetland protection plans and incorporating these efforts into watershed management plans. All efforts would be done presumably at the community level.
- Rick Cooksey of the USDA Forest Service presented strategies that could be used within the tax policy to provide incentives for sustainable development, conservation of land, and innovative examples promoting smart growth.
- Sandi Olek of the Maryland Department of Natural Resources (DNR) presented strategies for limiting impervious cover, particularly in areas that are undeveloped or moderately developed, and reducing the effects of impervious cover in highly developed areas, particularly those with detrimental effects on water quality. Strategies include gathering and disseminating information, promoting the implementation

of efforts to reduce imperviousness and tracking the results.

- Steve Saari of the Chesapeake Research Consortium presented strategies to identify and aid in the establishment of community watershed organizations. Strategies include identifying community watershed organizations, establishing new organizations and fostering community partnerships.

### The West Nile Virus

Members of the faculty of Johns Hopkins School of Hygiene and Public Health discussed their efforts to share information and to collaborate research studies to evaluate causes and effects of the West Nile Virus. They are also assisting the Bay Program's Living Resources Subcommittee to determine cumulative ecological effects of the virus. They suggested that the virus will likely be an ongoing seasonal threat that brings a new range of risks for ecological and human health. They reported that the virus is a threat to the elderly and young, primarily because of the use of pesticides in eradication efforts. Comments and information regarding ecological effects associated with the virus and eradication efforts can be directed to Dr. Lynn R. Goldman through e-mail at <[lgoldman@jhsph.edu](mailto:lgoldman@jhsph.edu)> or by telephone at 410-614-9301.

### Resource Lands Assessment Task Force

DNR's Cooksey also reported on issues that the Resource Lands Assessment task force has identified as areas of concern. He reported that the task force will examine existing data and research regarding forests, farms and wetlands and present their findings in an atlas-like document.

### Nutrient Subcommittee Report

Tom Simpson of the Maryland Department of Agriculture/University of Maryland presented the Nutrient Subcommittee's recommendations for establishing sediment goals and strategies for the Chesapeake Bay watershed. He stressed that while catastrophic flows are important, most sediment reaches the Bay during moderate flow events. Much of this

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## IC Highlights

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sediment is trapped within three main reservoirs that historically have provided 55 to 70 percent reduction in sediments to the Chesapeake Bay. Unfortunately, most of these dams will reach their capacity within 20 to 30 years, requiring increased sediment reductions and strategies for the Chesapeake Bay. Recommendations include developing goals and strategies for load reduction, incorporating the findings of other groups within the Bay watershed to determine the source and origin of the sediment load, and coordinating a select group of scientists, managers and federal, state and local officials to head up the effort to reduce sediment load to the Chesapeake Bay.

Scott Phillips and Lori Sprague of the U.S. Geological Survey (USGS) presented "Factors Affecting Nutrient Trends in Major Rivers Entering the Chesapeake Bay." The document, recently released, combines data collected by USGS with models developed for the Chesapeake Bay to identify sources of nutrients to several of the main tributaries of the Chesapeake Bay. Agriculture was the major source of both nitrogen and phosphorus to all of the tributaries studied, with the exception of the Patuxent River. Urban acreage increasing in all of the tributary basins is of particular concern, although point source concentrations have held steady or decreased. Source flow and loads are increasing in some basins because of increasing population. Rob Magnien of the Maryland DNR and Tom Fisher of the University of Maryland, Center for Environmental Studies, presented basin summaries for the James and Patuxent Rivers. For a copy of the report, contact USGS and refer to Water-Resources Investigations Report 00-4218.

Due to time constraints, April Marcy of the Alliance for the Chesapeake Bay was not able to formally present the Businesses for the Bay at this meeting and will present this at the next IC Meeting.



Lisa Mayo

*The Marsh Edge Trail at Blackwater National Wildlife Refuge is an example of how federal lands, including military lands, can benefit from participation in the Chesapeake Bay Gateways Network. The Refuge will work with Friends of Blackwater, a local nonprofit organization, to complete a Gateways Network demonstration project that will enhance its visitor center.*

## Bay Gateways

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access to the Bay shoreline and tidal waters. In particular, federal agencies have promised to open or enhance 200 additional miles of shoreline for public access by 2005. By participating in the Gateways Network, the military can achieve this goal.

In addition to military sites, Gateways sites can include places such as historic towns or ports, museums, and national or state parks and refuges. There are currently 40 designated Gateways sites, located within Maryland, Pennsylvania, Virginia, and New York. New sites are added to the Network each year. It is hoped that the sites will ultimately be linked together by tours relating to their principal themes. A map and guide to the Gateways Network is slated for publication this year.

Once a Gateways site has been designated, it becomes eligible to receive technical assistance and to compete for matching grants for demonstration projects that meet the goals of the program. Military installations can prepare now for the next round of grant proposals by forming partnerships with state or local governments, or nonprofit organizations. These partners can then apply for funding to

support projects at federally managed Gateways sites, including DoD and Army sites. Projects should address the interpretation, access, or conservation of Bay resources, and can include elements such as the creation of signs and brochures, audio-visual productions, access point enhancements, or habitat restoration efforts at the site.

Whether through a scenic shoreline, historic landmark, or wildlife refuge, the military has an important role in the telling of the Chesapeake Bay story. For information on how to nominate a Gateways site on your installation, or for a current list of designated sites and other program information, visit the World Wide Web at <<http://www.baygateways.net>> or call 1-800-YOUR-BAY, ext. 841.

### Chesapeake Bay Program Spring 2001 Meetings

The next two Federal Agencies Committee (FAC) meetings will be held on April 12 and May 24, and the next two Implementation Committee (IC) meetings will be held on April 19 and May 31. FAC and IC meetings usually start at 10:00 a.m., and most of the meetings are held at the Chesapeake Bay Program Fish Shack Conference Room in Annapolis, Md. Contact the Chesapeake Bay Program at 1-800-YOUR-BAY to verify the meeting time and location.