



# The Army's Chesapeake Review

Special heritage article in this issue, see page 5

## State of the Bay

### IC Focuses on the Elizabeth River

Marjorie Mayfield, director of the Elizabeth River Project, gave an update on the "State of the Elizabeth River" and the status of implementing the Elizabeth River Regional Action Plan (RAP) to the Implementation Committee (IC) on Dec. 2, 1999.

In 1993, the Chesapeake Bay Program designated the Elizabeth River, the Baltimore Harbor, and the Anacostia River as toxic "regions of concern" in the Bay watershed. The mouth of the Elizabeth River supports the largest Naval Base and coal exporting business in Virginia and is the most populated spot on the Bay. "The Elizabeth River system is still in the worst condition of any other river system on the Bay, but it also shows the most improving trends," stated Dr. Daniel M. Dauer of Old Dominion University. His statement is based on water quality data (status and trends for nutrients, chlorophyll, and bottom dissolved oxygen) collected by numerous agencies for tributaries throughout the Chesapeake Bay between 1985 and 1998.

Key monitoring findings from the draft *State of the River 2000* report indicate the following:

- Sediment contamination is 18 times worse in the Elizabeth River than in the Baltimore Harbor. Only 6 percent of the Elizabeth River is unaffected by sediment.
- Elevated copper is a growing concern.
- Conventional trends, such as dissolved oxygen, toxicity in the water column, and nutrients are showing improvement.

(Continued on page 6)



From left: Jolene E. Chinchilli, PA executive director of the Chesapeake Bay Foundation; Scott Anderson, director of development and communications for the PA Chapter of The Nature Conservancy; Peter J. Zug, PA House of Representatives; and Major General William B. Lynch, adjutant general of the PA National Guard. (Photo by Shana Bullock)

## Ft. Indiantown Gap Begins Restoration Project

By Adriane Miller

To the casual observer, the old Army landfill isn't much to look at. But to Shannon Henry, forest program manager with the Pennsylvania Department of Military and Veterans Affairs at Fort Indiantown Gap, the retired landfill is a place of potential beauty, the perfect setting for acres of native grassland.

"Look, the warm-season grasses are already there," he said, pointing at tufts of little bluestem among the interloping strands of bluegrass. As if to punctuate the charm of the place, a noisy training helicopter flies directly overhead. Henry doesn't seem to notice—he's too busy imagining the spot transformed into a 25-acre grassland, part of a larger habitat restoration project he has helped launch at Fort Indiantown Gap.

Working closely with the Chesapeake Bay Foundation, The Nature Conservancy, and the Environmental Protection Agency (EPA), this installation near Harrisburg has begun to restore several acres of the Chesapeake Bay watershed within its borders to their natural state. In

just two years, Henry said, the installation will restore seven miles of stream buffer—known as riparian forest—plus five acres of wetlands and 25 acres of warm-season grasslands. Henry said the project's goal is to improve water quality in the tributaries located on the installation, control streamside erosion and sediment, and provide wildlife habitat.

The effort is being funded by a \$42,800 grant from the EPA's Chesapeake Bay Habitat Restoration Challenge Program. With an additional \$65,200 in funds provided by the Chesapeake Bay Foundation, The Nature Conservancy, and the Pennsylvania Department of Military Affairs at Fort Indiantown Gap, the project has \$108,000 to invest in replanting and restoration.

The restoration project represents a major milestone for the U.S. Army and other federal agencies. They are committed to restoring 100 acres of wetlands each year beginning in 2000 and 200 miles of riparian forest buffer by 2010.

(Continued on page 6)

# Special Conference on Forests Includes Federal Role

By Don Maglienti

One of the first in-depth looks at forest loss and fragmentation in the Chesapeake Bay watershed took place in Annapolis this past November. The Chesapeake Bay Program, together with the U.S. Forest Service, the Alliance for the Chesapeake Bay, and a number of other state agencies and nonprofit organizations, hosted a three-day conference titled "Balancing the Landscape – Retaining Forests in the Chesapeake Bay Watershed." The event drew about 150 participants from throughout the watershed, including scientists, natural resource managers, community leaders, land use planners, and decision makers.

Stage-setting presentations described the history and current state of forested land in the watershed, and subsequent discussions provided a better understanding of the ecological, economic, and policy implications of forest fragmentation. Case studies in forest conservation helped to illustrate management techniques from different perspectives, including those of business, state government, and private landowners. Representatives from Pennsylvania, Maryland, Virginia, and the federal government then held concurrent breakout sessions to address the development of strategies for the reduction of forest fragmentation.

The conference helped to reinforce a current trend with federal and state agencies: thinking about natural resources on a watershed level and addressing needs through cooperation. Participants from different agencies identified the most significant problems that cause fragmentation, and then sought to develop practical solutions that federal and state agencies could implement.

Among the problems identified were current increases in population and personal wealth, together with a shift in development from urban into rural areas, that contribute to a scarcity of land resources. The public remains uninformed about the consequences of land management decisions. Local officials receive little or no information about management preferences of landowners, and developers' plans are often not compatible with local objectives for forest management.

Forestry professionals saw, among other things, a federal role as a facilitator and provider of information, and an advocate of good management practices. Federal agencies can provide information to landowners, land managers, and the voting public about the consequences of land management decisions, as well as focused studies to better inform policy makers. The encouragement of states to take tough planning actions for the restoration of urban areas will help shift development pressure away from rural areas. Increased use of tax credits or incentives, as well

as an increase in federal funding for tools such as conservation easements, can protect more land from development and fragmentation. By providing design assistance and supporting integrated planning at the local level, federal agencies can encourage the integration of so-called "green infrastructure." It was also suggested that agencies can spread information to home building associations and to local governments about how contiguous forests are crucial to restoration efforts and pollution prevention. Rick Cooksey, U.S. Forest Service liaison to the Chesapeake Bay Program, stated that, in addition to this critical support, "it was clear that federal partners can help by considering their facility development and management activities in the context of the larger community or watershed in which they reside. Being a good neighbor and leading the way just makes sense."



Conference attendees at the forest fragmentation conference. (Photos by Lara Lutz, Alliance for the Chesapeake Bay)



This newsletter is produced by Horne Engineering Services, Inc. under Contract No. DACA31-97-D-0051 for the U.S. Army Environmental Center (USAEC). Please contact Janmichael Graine, USAEC by e-mail, <Janmichael.Graine@daapgea050.apgea.army.mil> or by telephone, (410) 436-7113, DSN 584-7113 with any questions, comments, or installation success stories.

Contributing writers include Sonja Blake, Bowie State University, and Melissa Kamnikar, Adriane Miller, and Don Maglienti of Horne Engineering Services, Inc. Contributing editors include Alison Cooley, Angela McCorkle, William Maly, and Helene Merkel of Horne Engineering Services, Inc. Design and layout provided by Alison Cooley of Horne Engineering Services, Inc.

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 <www.hqda.army.mil/acimweb/env/cbi/index.htm>. If you want to be on the distribution list, contact Alison Cooley, Horne Engineering Services, Inc., at <acooley@horne.com>, or call (703) 641-1100.

## **FAC Highlights**

### **Important FACts**

The Federal Agencies Committee (FAC) met on Dec. 9, 1999, at the Chesapeake Bay Program Office in Annapolis, Maryland. During the meeting, FAC members reviewed the draft Chesapeake 2000 (C2K) Agreement, and discussed progress made on the Federal Agencies Chesapeake Ecosystem Unified Plan (FACEUP).

#### **Draft Chesapeake 2000 (C2K) Agreement**

The draft C2K Agreement is the result of the efforts of citizens, scientists, and policy makers from all over the region to develop a new round of commitments to ensure the health and productivity of the Bay watershed through the next decade and beyond. There are five major sections in the draft Agreement:

##### **1. Living Resource Protection and Restoration**

This section commits to a tenfold increase in oysters over the next 10 years. It also calls for the identification and control of exotic species that may be detrimental to the Bay's ecosystem, especially those that are carried into the Bay through ballast water.

##### **2. Vital Habitat Protection and Restoration**

Within this section, the draft Agreement recommits to the existing goal of restoring 114,000 acres of submerged aquatic vegetation. It commits to a no net loss of jurisdictional wetlands, as well as a net gain of 25,000 acres of tidal and non-tidal wetlands at a rate of 2,500 acres per year. The draft Agreement calls for local governments and communities to identify those wetlands that are most in need of protection.

##### **3. Water Quality Restoration and Protection**

Commitments on water quality include the continuance of efforts toward the 40-percent nutrient reduction goal, as well as progress on nutrient and sediment reduction that would allow the removal of the Bay from the Clean Water Act list of impaired waters by 2010. The draft Agreement specifically addresses the preservation of sediment retention capacity behind dams in the lower Susquehanna River. Also called for is the eventual zero release of chemical contaminants from point sources, the prioritization of restoration efforts on urban waters, and the establishment of "no discharge zones" for human waste from boats.

##### **4. Sound Land Use**

Although no numeric goals for land conservation have yet been drafted, this section commits to a 30-percent increase in public access to the Bay over 10 years, with 500 new miles of water trails over 5 years. By 2010, Bay Program Partners will commit to rehabilitate 1,050 brownfield sites. No numeric goals for transportation issues have been drafted.

##### **5. Individual Responsibility and Community Engagement**

This section of the draft Agreement contains language about improving public outreach and education and enhancing community-based programs for restoration and protection. It also commits Bay Program signatories to demonstrate examples of management, development, redevelopment, technology, and partnership that are consistent with the principles and guidelines of this draft Agreement.

The public comment period for the draft C2K Agreement ended on March 31. To obtain a copy of the draft Agreement, visit the Chesapeake Bay Program web site, <[www.chesapeakebay.net](http://www.chesapeakebay.net)>, or write to: Chesapeake Bay Program Office,

410 Severn Avenue, Suite 109, Annapolis, MD 21403.

### **Announcements and Updates**

- The Conservation Landscaping Seminar for Federal Facilities that was scheduled for March 6–10 at the National Conservation Training Center in Shepherdstown, West Virginia, has been rescheduled for September 11–15. Call Alison Cooley at (703) 641-1100 for more information.
- The FAC was asked to contribute ideas for projects on federal lands in the Bay watershed that would be appropriate for members of AmeriCorps and the National Civilian Community Corps.
- The Federal Agencies Beneficial Landscaping Guide is now in draft form. Copies can be obtained by contacting Britt Slattery of the U.S. Fish and Wildlife Service at (410) 573-4581. Examples of federal case studies for inclusion in the Guide are still welcome.
- Working toward fulfillment of a commitment within FACEUP, the General Services Administration released draft proposed language for model lease provisions that address Chesapeake Bay stewardship goals. FAC members will evaluate the draft language and provide comments.

#### **Tentative FAC and IC Meeting Schedule 2000**

##### **FAC Meetings:**

- Feb. 17
- March 30
- May 11
- June 22
- Aug. 3
- Sept. 14
- Oct. 26
- Dec. 7

##### **IC Meetings:**

- Feb. 24
- April 6
- May 18
- June 29
- August 10
- Sept. 21
- Nov. 2
- Dec. 14

***Meeting dates and locations are subject to change. Confirm meetings by calling 1-800-968-7229.***

## **IC Highlights**

# **January Meeting Announcements**

The Implementation Committee (IC) met Jan. 13 at the Chesapeake Bay Program Office in Annapolis, Maryland. Following are meeting highlights:

- Carlton Haywood, chair of the Monitoring Subcommittee, delivered an update on the Chesapeake Bay Basin-Wide Monitoring Strategy. "We hope it [the strategy] will be used to guide the Bay's funding decisions, direct the collective resources of the partners, and add value to their monitoring," Haywood said. The Monitoring Subcommittee is expected to review the final strategy by April, and the IC will review it by June.
- Patrick Berry of the Natural Resources Conservation Service (NRCS) reported on the U.S. Department of Agriculture's 1997 National Resources Inventory. The inventory is a statistically based sample of nonfederal land use. The 1997 inventory shows that nearly 16 million acres of forest, cropland, and open space were converted to urban and other uses from 1992 to 1997. A news release from the office of Vice President Al Gore, circulated at the IC meeting, reported that the average rate of conversion for those 5 years—3.2 million acres a year—is more than twice the rate recorded from 1982 to 1992. Counties in Maryland and Pennsylvania both showed a 40- to 50-percent increase in developed land from 1982 to 1997. Berry said the sampling grids used to obtain the data were established in the 1970s, covering 5 to 10 percent of nonfederal land in each county of the United States. Sampling units of about 109 acres each were randomly plotted. The IC said land use data just for the Chesapeake Bay watershed would be useful to have. Committee members asked

Berry to investigate getting such data. For details about the NRCS and the 1997 inventory, visit <<http://www.nhq.nrcs.usda.gov/NRI/1997>>.

- Jack Frye of the Virginia Department of Conservation and Recreation said the memorandum of understanding on animal waste interstate transport should be signed by signatory and non-signatory states on or before the June Executive Council meeting.
- Amanda Bassow of the Chesapeake Bay Program Office presented the findings of the recent Community Watershed Task Force survey. She said the survey's goal was to find out what watershed organizations need and how the CBPO can assist them. The CBPO mailed the survey to 280 watershed organizations in signatory states. It received 84 responses, just shy of the CBPO's goal of 100 responses. Most of the respondents were community organizations, with mostly equal responses from Maryland, Pennsylvania, and Virginia. Their three top issues of concern include drinking water, rivers and streams, and natural disasters. Bassow noted the survey was conducted soon after Hurricane Floyd in September 1999, and the responses reflect that the disaster was still a fresh memory. The survey also showed that the organizations need funding, plus support with planning and organizational development.
- Using 3-D computer modeling, Dave Jasinski of the CBPO showed how the Bay's water temperature and dissolved oxygen levels in 1999 had a dramatic effect on its living resources. Jasinski said striped bass had a "decent" habitat throughout the Bay in June 1999, with optimal water temperatures and dissolved oxygen. But by August 1999, very warm air temperatures had raised water temperature, causing a net

loss of dissolved oxygen in the water. With high surface water temperatures and low, deep water oxygen levels, the striped bass were doubly stressed.

- Tom Simpson of the Nutrient Subcommittee said the current system CBPO uses to make growth projections is likely to produce long-term errors and should be changed. The same activity that required 10 acres of land in 1990 may require radically different acreage 30 or 40 years later. The current growth projection system, however, does not account for such differences over time, Simpson said. "We feel comfortable projecting to 2003 or 2005 with our current methodology, but for the long term we need a new methodology," he said.

---

## **State of the Bay Coastal Marine Demonstration Project**

Hoping to provide faster, more accurate, and more detailed forecasts of coastal marine conditions, the National Ocean Partnership Program is preparing to begin its second test of the Coastal Marine Demonstration Project (CMDP). Frank Aikman of the National Oceanic and Atmospheric Administration's National Ocean Service gave an overview of the CMDP at the Jan. 13 Implementation Committee meeting.

The objective of the CMDP is to develop, improve, and deliver forecasts of coastal environmental conditions for mariners of the Chesapeake Bay and surrounding coastal ocean. The CMDP tracks, analyzes, and forecasts winds and tides on the Bay, hour by hour. "Before, what the mariner had available was tidal prediction, based on a history of tides," Aikman told the IC.

In addition, Aikman said, CMDP provides 4-kilometer resolu-

*(Continued on page 5)*

## **State of the Bay** **Coastal Marine Project**

(Continued from page 4)

tion, "a much higher resolution than anyone has ever had before." The CMDP model shows much more detail in wind direction and speed in much smaller areas. Typically, he said, the National Weather Service can provide forecasts for overall wind direction in the Bay, but not much detail about wind direction in different parts of the Bay, because it relies on low-resolution data.

CMDP completed its first demonstration on July 30, 1999, and its second in March. Aikman said demonstrations were scheduled in summer and winter to test the model under very different conditions. The summer demonstration analyzed wind and water levels. The second demonstration analyzed wind and water-level data, plus currents, salinity, temperature, and waves.

Eventually, the CMDP model will provide analysis and forecasts of wind, water levels, currents, salinity, temperature, waves, pH levels, fog, visibility, and other ocean features. It should be operational this year, Aikman said. Anyone will be able to review an on-line map of the Bay, point and click on various weather stations, and get an up-to-the-moment history of water levels and other factors, with a forecast for the next 24 hours.

Aikman said he sees a broad application of the data the CMDP model will produce. It will help researchers to better understand trends in bank erosion and submerged aquatic vegetation, for example.

The CMDP is a component of the National Ocean Partnership Program, administered by the Office of Naval Research. It is funded by the U.S. Navy, the National Oceanic and Atmospheric Administration, private enterprise, and universities.

Visit <http://cmdp.wsicorp.com> for more information about the CMDP.

## **In Celebration of Black History and Womens' History Months**

### **The Army Salutes RADM Lillian Fishbourne**

**By Sonja Blake**

*Reprinted from "Profiles in Excellence," Issue 8, 2000.*

An old African proverb says "I am because we are." Thanks to the path that was paved by unsung "heroes" in African-American military history, Lillian Fishbourne became the first African American woman to be promoted to the rank of Admiral in the United States Navy. Her achievement is not just the success story of an isolated individual. Rather, it is the celebration of African American women in military history.

In early American military history, women weren't allowed to enlist and were often threatened with arrest if they attempted to join the armed services. When Mary McCleod Bethune, founder of the National Council of Negro Women, collaborated with Eleanor Roosevelt in drafting the legislation to form the Women's

Army Corps, she created a new door of opportunities for African-American women. Today, Fishbourne's naval career is

the result of her own hard work and the pioneering efforts of Bethune and the first group of black females who joined the Women's Army Corps. Her career reveals her connection to the courage and experience of her predecessors.

Fishbourne was born in Patuxent River, Maryland, on March 25, 1949, and she was raised in

Rockville, Maryland. She graduated with a bachelor of arts degree in sociology from Lincoln University in 1971, and in 1980 received a master of arts degree in management from Webster College, in St. Louis, Missouri.

Over her Navy career, Fishbourne completed postgraduate school and worked her way through the ranks. In 1993, she accepted the position of Chief, Command and Control Systems Support Division, at the Command, Control, Communications and Computer Systems Directorate, The Joint Staff in Washington, D.C. In 1995, she assumed command of the Naval Computer and Telecommunications Area Master Station in Hawaii. Presently, she holds the position as the Director, Information Transfer Warfare, Command and Control Directorate, Chief of Naval Operations, in Washington, D.C.

Fishbourne was promoted to her current rank of Rear Admiral (RADM) on Feb. 1, 1998.

Many African-American military women pioneers said that their

gender was more of an issue than their race while serving in the armed forces. These women were excluded from service and dismissed if they had children. Today, the success of RADM Fishbourne proudly proves that courage and hard work transcend gender and racial boundaries.

***RADM Lillian Fishbourne, a native of the Chesapeake Bay watershed, became the first African-American woman to be promoted to the rank of Admiral in the United States Navy.***

## **IC Highlights**

### **December Meeting Announcements**

The Implementation Committee (IC) met on Dec. 2, 1999, at the Chesapeake Bay Program Office (CBPO) in Annapolis, Maryland. Announcements and highlights from this meeting include:

- Diane Esher, chairman of the Budget Steering Committee (BSC) presented the FY 2000 budget to the IC. Additional cuts to the Chesapeake Bay Program's (CBP's) budget needed to be taken due to further reductions in the U.S. Environmental Protection Agency (EPA) budget.
- Nita Sylvester, EPA, gave a presentation on the budget process. The presentation explains funding priorities and their determination, state implementation grants, CBP structure and their involvement in the budget process, and strategic planning. It is available on the CBP web page and will be updated as needed.
- The IC recommended a process the BSC can use to change the budget targets and the request for proposal (RFP) process. Diane Esher will form a small group from the BSC to evaluate these and other issues raised by the IC. A more functional process will be presented at the next IC meeting.
- Rich Batiuk, CBPO, reviewed issues involving water quality improvements and the total maximum daily load process that would be discussed at the Dec. 3 meeting of the six states, the District of Columbia, the CBPO, and EPA. A timeline through 2011 has been developed by the CBP Principal Staffs' Committee to improve Chesapeake Bay water quality and remove impairments.
- Gary Waugh, presented the results of the October 7 and 8,

1999 Education Summit. The Summit developed a clear course for education projects across the jurisdictions. The IC suggested that once the Education Workgroup sets up a method to evaluate education tools, curricula, and programs, they should include a feedback mechanism so the authors and funders of these tools know what is and is not working.

---

### **State of the Bay** **Focus on Elizabeth**

*(Continued from page 1)*

The RAP has identified five "critical areas" to focus all available resources on at this time. These five areas include the following:

- 1 Reduce sediment contamination because pollutants in the bottom of the river have been linked to tumors, cataracts, and deformities in fish, and pose human health risks.
- 2 Extensive vegetation loss. There has been a 50- percent decrease of tidal wetlands between 1944 and 1997. It is important to increase the amount of vegetated buffers, wetland acreage, and forested areas to provide habitat, trap sediments, and filter pollutants.
- 3 Improve pollution prevention and/or sustainable landscaping practices. Pollution prevention is considered one of the most effective means available to reduce toxic releases into the environment.
- 4 Establish an Elizabeth River monitoring program and data bank. Without a consistent way to measure river conditions over time, it is unknown whether management efforts are appropriate and the proposed actions are making a difference.
- 5 Reduce pollution from storm water runoff. Storm water runoff has been identified as the number one new source of pollution. Today, 90 percent of new pollution entering the Elizabeth River arrives in the

form of runoff from parking lots, lawns, and other industrial and residential surfaces.

---

### **Habitat Project**

*(Continued from page 1)*

"It is a pleasure to take part in this special partnership that will be a model for conservation and restoration efforts across the Chesapeake Bay watershed," said Jolene E. Chinchilli, Pennsylvania executive director of the Chesapeake Bay Foundation. "This partnership will help buffer the watershed, thus adding to its resilience and ultimately protecting the Chesapeake Bay."

Scott Anderson, director of development and communications for the Pennsylvania Chapter of The Nature Conservancy, said his organization's relationship with Fort Indiantown Gap is a good fit. "We do a lot of stewardship work with the installation, and we are delighted to be a part of this," he said.

"The Department of Military and Veterans Affairs is committed to the long-term protection of habitat sites on Fort Indiantown Gap," said Major General William B. Lynch, adjutant general of the Pennsylvania National Guard. "We look forward to working with both The Nature Conservancy and Chesapeake Bay Foundation."

EPA awarded the grant in October 1999. By early spring 2000, project leaders and volunteers will begin planting and restoring forest stream buffers, and establishing a native warm-season grass plot to serve as a local seed source for future grass restoration projects.

"We won't need to do a lot of planting," said Jennifer Barto, a Chesapeake Bay Foundation coordinator in Pennsylvania. All the plants need is an opportunity, she said. Native seeds survive for generations.

"Even after 100 years of impact, given the appropriate conditions, the seeds come back to life."