



# The Army's Chesapeake Review

March 1997



## Federal Agencies Committee Meeting Highlights

A Federal Agencies Committee (FAC) meeting was held January 13, 1997 at the Chesapeake Bay Program Office (CBPO) in Annapolis, Md. Announcements and highlights from this meeting included:

- The Federal Land Stewardship (FLS) Workgroup reported that it is developing its mission and establishing priorities for its program. Transportation issues, educating federal land managers, and the riparian forest buffer initiative are three priorities that have been determined so far.
- The Patuxent Naval Air Station applied for a Bay Partners Community Award. This action led the award committee to consider establishing/revising criteria for the program that would encourage military installations and other federal agencies to apply for an award.
- A FAC conference is being developed for FY98.
- The Anacostia Federal Workplan is in production and scheduled to be completed by mid-March 1997. The U.S. Army Corps of Engineers (USACE) plans to maintain their lead role on the project and oversee the implementation of the plan.
- Five federal facilities (Rays Town Military Facility, Fort Belvoir, Fort Lee, Fort Meade, and the Brentwood Post Office and Metro railyards) have expressed interest in having Federal Facility Site Assessments conducted on their sites in 1997. The CBP is looking to increase their selection of experts to conduct the assessments. Contact Chip Lamason at 1-800-YOUR BAY, ext. 720, if you are interested in being a part of an assessment team.
- Carol Browner, U.S. Environmental Protection Agency (EPA) administrator and Executive Council (EC) chairperson, would like to become more involved in the CBP's efforts by attending CBP-related events. If you are interested in inviting Browner to such an event at your installation, contact Janmichael Graine at (410) 671-1687.
- Browner has initiated a new program entitled, the Wetlands Initiative of the EC Chair. Through this program, financial and personnel resources are being established to work with community groups and local governments on a watershed basis to identify key wetlands for protection and restoration. This process does not supersede current wetlands laws or initiatives. The goal is to establish a solid baseline of wetlands information and establish a proactive wetlands management program.

## Implementation Committee Meeting News

An Implementation Committee (IC) meeting was held on January 23, 1997 at the CBPO in Annapolis, Md. Announcements and highlights from this meeting included:

- The Nutrient Subcommittee reported that 25% of the houses in the Bay's watershed use septic systems. A majority of these homes are in Pennsylvania. These systems contribute 300 million pounds of nutrients to the Bay every year. The 40% nutrient reduction goal seeks to reduce this amount by 72 million pounds.
- The Communications Subcommittee discussed their upcoming 1997 initiatives, which will include helping publicize the Bay Partner Communities Award Program; developing an Arbor Day poster; assisting with the Businesses for the Bay Program; providing media coverage for new fish passages and the watershed conference; coordinating a media boat tour for the 1997 Reevaluation; and continuing on-going projects such as BayScapes, environmental indicators, and Touch the Bay.
- The Susquehanna River Basin Commission is distributing three new documents on publicly-owned lake assessments, sub-basin surveys, and their bi-annual report.
- A training manual for nutrient management is available through the CBPO. Call 1-800-YOUR BAY for a copy.

## State of the Bay: 1996 Flows

At the January 23, 1997 IC meeting, Scott Phillips, U.S. Geological Survey (USGS), presented a summary of the record flows of freshwater that entered the Chesapeake Bay in 1996. Phillips said that the USGS has been monitoring the Chesapeake's flow every month since 1955.

According to Phillips, the 1996 flow of the Bay's major tributaries broke the previous record that was established when Hurricane Agnes devastated the Bay in 1972. Approximately 87.5 billion gallons of water entered the Bay per day in 1996. The Chesapeake was above its average flow rate almost every month of 1996. January and December set all-time highs when record snow levels melted in a short period of time and caused a flood in the Bay's upper watershed.

Most of the water entered the Bay via the Susquehanna River, which typically contributes over 50% of the Bay's freshwater. In 1996, however, there were a couple of months when the Potomac's input exceeded the Susquehanna's.

The 1972 record flows had a devastating effect on the Bay and its aquatic life, particularly the Chesapeake's submerged aquatic vegetation (SAV). Phillips reported that the 1996 record flows were not as devastating because the majority of the heaviest flows occurred during the winter when the ground was frozen (which meant low sediment and nutrient run-off) and the SAV was dormant. Phillips also said that improved management actions also contributed to the protection of the Bay during these record flows, because there was less sediment and nutrients available to run-off into the Bay.



# Aberdeen Proving Ground Initiates SAV Program



Submerged aquatic vegetation (SAV) is often considered the life-blood of the Chesapeake Bay because of its many values and functions. SAV produces oxygen; reduces wave energy in the Bay and against its shoreline; helps improve water quality by filtering and trapping sediments and absorbing nutrients; and provides food, shelter, and nursery areas for many of the Bay's fish and shellfish species. The Chesapeake Bay Program (CBP) considers SAV to be an impor-

provided valuable lessons learned. The communication also helped the team collect and evaluate data using methods that can be incorporated into the CBP's SAV database.

The data and findings are currently being evaluated and consolidated into a report. From the visual mapping phase of the project, however, APG discovered that it had more SAV than the sporadic surveys of the past and annual overflight photograph surveys had indicated. Fifteen species of SAV were discovered during the survey, with Eurasian watermilfoil (*Myriophyllum spicatum*), hydrilla (*Hydrilla verticillata*), wild celery (*Vallisneria americana*), and

tant indicator of the Chesapeake's health, because it is not subject to harvesting pressure and grows best in good water quality conditions.

In January 1996, a partnership between the University of Maryland's Natural Resources management Program and the U.S. Army Environmental Center (USAEC) resulted in a proposal to map the installation's SAV beds and monitor

the water quality. The result of the proposal was an installation/inter-agency partnership between USAEC, the U.S. Army Research Laboratory (ARL), and Aberdeen Proving Ground's (APG's) Directorate of Safety, Health, and the Environment (DSHE). This partnership provided the necessary funding and resources that enabled the project to evolve from an idea into a reality. ARL provided a boat, office space, new monitoring instruments, and additional manpower to work with the SAV team while DSHE provided program oversight.

APG's SAV team established 40 monitoring sites throughout APG's waters, which include Carroll's Island, Pooles Island, Spesutie Island, and segments of the Bush and Gunpowder Rivers. From March through November, the team sampled at these monitoring sites for total suspended solids, nutrients (phosphorus and nitrogen), Secchi depth, chlorophyll *a*, salinity, depth, temperature, conductivity, and pH.

Outside agencies and organizations became involved in the effort and provided expertise and input. SAV experts from Harford Community College and the U.S. Fish and Wildlife Service (USF&WS) provided the team with standard operating procedures for water quality sampling and monitoring, SAV identification guides, and other technical guidance and support. The Alliance for the Chesapeake Bay lent equipment and also helped train the SAV team on standard water quality monitoring procedures. These exchanges made the SAV team's efforts more efficient, because the experts

## The Bay Program's SAV Goal

As the water quality of the Chesapeake declined so did SAV. In 1993, the CBP agreed to work to restore SAV to their historical levels. The CBP's initial goal is to restore SAV to all of the areas that were vegetated at one time or another since the early 1970s (approximately 114,000 acres). Overall, Bay grass total acreages have risen approximately 60% since the low point in 1984. At the current rate of recovery, this goal will be achieved by 2005.

The CBP further directed that a target level be developed for the restoration of SAV to all shallow water areas delineated as existing or potential SAV habitat down to 1 meter depth. The CBP is also assessing a long-term goal that coincides with the natural habitat limitations of SAV growth down to 2 meters in depth (potentially 600,000 acres). For more information, contact Dr. Peter Bergstrom, USF&WS, at (410) 573-4554.

common waterweed (*Elodea canadensis*) being the most predominant species.

The SAV team is expanding its efforts and its program. A member of the SAV team recently presented the study's findings to the CBP's Monitoring Subcommittee SAV Workgroup and has become a regular representative for the Army at these meetings. In the spring of 1997, the SAV team continued monitoring SAV and sharing its

data with the CBP. APG partnered with several agencies to develop a public outreach video on SAV that used the Army's video production facilities to save money and highlights APG's efforts as a key example.

The installation will start the restoration phase of its program by planting new SAV beds in the summer of 1997. An informal partnership has been established with the University of Maryland to provide research assistants to help APG plant the SAV while they gain field experience. Another informal partnership has been established with Harford Community College's Environmental Technology Program where students will monitor water quality in areas of the Bush River adjacent to APG to supplement APG's information about the tributary. The SAV team also plans on developing SAV mapping, monitoring, and restoration guidance for the other Bay area installations to use and traveling to these installations to help them establish their programs. For more information, contact Julie Bortz, APG's SAV team coordinator, at (410) 278-9119.

## Other Items

- This newsletter is now available on DENIX. To access, go to the main DENIX screen at [denix.cecer.army.mil/denix/denix.html](http://denix.cecer.army.mil/denix/denix.html). Select Public Menu, then choose News and Information, and finally select Army's Chesapeake Review.
- Starting in April, the newsletter will be distributed via e-mail or DENIX. Contact Susan Phelps, Horne Engineering, at [sphelps@home.com](mailto:sphelps@home.com) or call (703) 641-1100 to make sure that you are on the distribution list.
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