

 U.S. ARMY

CHESAPEAKE BAY STRATEGY

APRIL 2024



BE ALL YOU CAN BE.

THE ARMY AND THE CHESAPEAKE BAY:

SUSTAIN THE MISSION, PRESERVE THE BAY AND SECURE OUR FUTURE



Letter From the Assistant Secretary of the Army

The Chesapeake Bay estuary, one of this Nation's largest and one of the most productive estuaries host immense biodiversity that has supported human populations for thousands of years. As the largest Department of Defense landholder in the Chesapeake Bay watershed, the Army is one of many stewards of this nationally significant asset. As part of the Army's commitment to protect and conserve the Bay, we are pleased to present an update of the Army Chesapeake Bay Strategy.

This Strategy lays out the blueprint for the Army's contribution toward a more sustainable future for the Bay. The many challenges in restoring the Bay can only be successfully met through collaborative efforts and partnerships. While much remains to be done to improve the overall health of the Bay, for our part the Army has made considerable progress to restore and sustain healthy habitats and improve water quality in the Bay. Whether it was implementation of best management practices for storm water runoff at Fort Gregg-

Adams or the conservation of thousands of acres of lands at Aberdeen Proving Ground, the Army has undertaken concrete actions over the last decade to build resilient, sustainable installations and communities. Along the way, we have strengthened relationships with our fellow stewards and fostered new community partnerships that we enrich our collaboration in the years to come. Since publication of the original strategy in 2009, climate change and installation resiliency have become top priorities for the Army, which means we will be even more focused on improving the Bay's water quality, protecting biodiversity, promoting sustainable development of watershed communities, and building regional capacity to adapt to the potential effects of climate change.

This strategy represents our continued dedication to the Chesapeake Bay community that we are a part of and to the Nation. Today, more than ever the Army is committed to the protection of this national treasure—the Chesapeake Bay.

Rachel Jacobson
Assistant Secretary of the Army
Installations, Energy and Environment



Executive Summary

The Army is the largest Department of Defense landholder in the Chesapeake Bay watershed. The Army has an environmental stewardship obligation while it ensures our Soldiers are prepared for their national defense mission. The Army Chesapeake Bay Strategy is a science-based action agenda that reflects adaptive management principles and contributes to the long-term recovery of the Chesapeake Bay. The Chesapeake Bay Strategy integrates climate resilient conservation and protection efforts for the Chesapeake Bay into the Army's national defense activities.

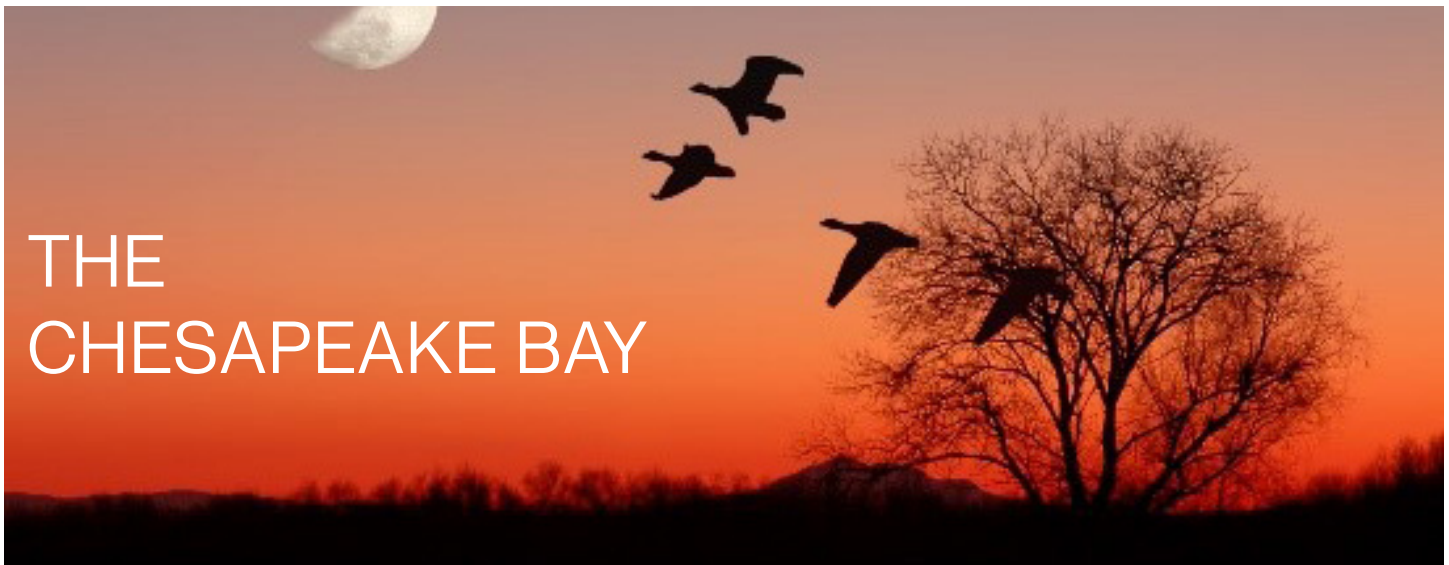
Since publication of the original strategy in 2009, the Army has invested significant resources into land conservation, endangered species protection, regulatory compliance, and strengthening regional partnerships with local communities. Whether it was implementation of best management practices for storm water runoff at Fort Gregg-Adams or the conservation of thousands of acres of lands at Aberdeen Proving Ground, numerous projects have been undertaken over the last

decade to build resilient, sustainable installations and communities (see Appendix A. Army Chesapeake Bay Conservation Accomplishments 2016-2023). The revised strategy contains four clearly defined goals designed to address the priorities established in Chesapeake 2000, the Department of Defense Chesapeake Bay Strategic action plan, the Chesapeake Action Plan, Executive Order 13508 (Chesapeake Bay Protection and Restoration), and the Army Climate Strategy.

The Army Chesapeake Bay Strategy is a hallmark of the Army's commitment to improve Bay water quality, protect biodiversity, promote sustainable development of Bay watershed communities, and build regional capacity to adapt to the potential effects of climate change. The Army shares the 2014 Chesapeake Watershed Vision of an environmentally and economically sustainable Chesapeake Bay watershed with clean water, abundant life, conserved lands and access to the water, a vibrant cultural heritage, and a diversity of engaged citizens and stakeholders.

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THE CHESAPEAKE BAY

The Chesapeake Bay is the nation's largest estuary, covering approximately 2,500 square miles. It is also one of the largest and most biologically productive estuaries in the world. The entire Chesapeake Bay watershed covers 64,000 square miles, including the District of Columbia and large portions of Maryland, Virginia, Pennsylvania, New York, Delaware, and West Virginia. Over 17.5 million people live in the watershed and depend on the Bay and its tributaries as a source of drinking water, food, energy, recreation, and jobs¹. More than 3,600 species of plants and animals rely on the Bay's unique blend of freshwater and saltwater habitats.



Wetlands at Fort Walker, VA. (Photo credit: U.S. Army)

Health Of The Chesapeake Bay

Scientists first identified a decline in the health of the Bay in the 1960s. In 1965, Congress passed the Rivers and Harbors Act assigning the U.S. Army Corps of Engineers (USACE) with the task of studying the physical and hydrodynamic characteristics of the Chesapeake Bay. By the 1970s, Congress directed the Environmental Protection Agency (EPA) to study the Bay and determine the cause of the decline. These early studies confirmed that Bay water quality was being degraded by inputs of nutrients, toxins, and sediments, and that a significant portion of these were delivered to the Bay via “nonpoint sources,” including storm water and agricultural runoff. The results of these studies later contributed to the first Chesapeake Bay Agreement in 1983. This agreement was a cooperative effort to restore the living resources in the Bay and prompted EPA's efforts to establish a Chesapeake Bay Program (CBP).

The CBP remains a partnership of federal, state, and local governments, non-governmental organizations, academic institutions, and other entities aimed to restore and protect the Chesapeake Bay and its watershed. The CBP conducts an annual assessment of key Bay health indicators. The most recent assessment—Bay Barometer: An Annual Report on the State of the Program and the Health of the Chesapeake Bay (2021-2022), showed that, although substantial effort and successes have occurred in certain parts of the ecosystem and specific geographic areas, the Bay’s overall health remains degraded.

The Bay continues to have poor water quality, degraded habitats, and low populations of many species of fish and shellfish. The increase of plastic pollution, particularly microplastics, entering the Bay from land runoff is an emerging issue the Army is closely monitoring. Their physical and chemical impacts have the potential to disrupt the aquatic food chain and ultimately the health of humans that depend upon the Bay for drinking water, food, and recreation. To address this growing concern, in 2021 the CBP formed the Plastic Pollution Action Team

(PPAT) to provide strategic oversight, lead research efforts to close knowledge gaps, and develop policy to address microplastics in the Bay. Their work led the CBP that same year to issue its science-based strategy to address microplastics Bay wide and the formulation of an ecological risk assessment model examining the impacts of microplastics on striped bass in the Potomac River.

Progress is evident in some key areas. As of 2021, six of the ten originally selected tributaries for large-scale oyster restoration have been restored, as well as an additional 11th tributary (the Eastern Branch of the Elizabeth River). Restoration work is underway in the remaining four tributaries and is expected to be completed by 2025. Additionally, since 2010, 237 additional public access sites have opened on and around the Chesapeake Bay. This represents a 79% achievement rate of the partnership’s goal to add 300 new access sites to the watershed by 2025. Despite on-going progress in some areas, the Bay’s most pressing health issues today are nutrient and sediment pollution, toxic chemical contaminants, and habitat loss.



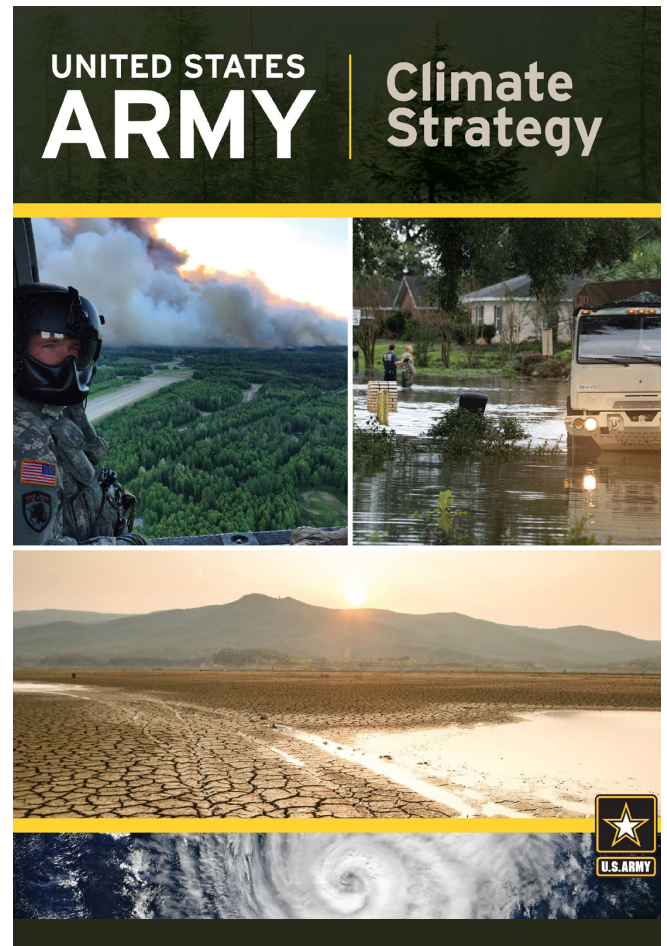
Climate Change and the Chesapeake Bay

Climate change is an existential threat to American national and economic security that must be urgently addressed. The world has already experienced the compounding effects of climate change through increased air and water temperatures, rising sea levels, changing precipitation patterns, and more frequent and intense extreme weather.

These impacts will affect the Army in fundamental ways, from how and where units operate and train, to how the Service, as a whole, equips and sustains Soldiers to fight in multi-domain operations.

The Army recently published the Army Climate Strategy (ACS) 2022 and Army Climate Strategy Implementation Plan (ACS-IP) 2022 (fiscal years 2023-2027). These documents establish the Army's overarching goals to reduce greenhouse gas emissions across Army installations and incorporate the security implications of climate change in strategy, planning, acquisition, supply chain, and installation management. The ACS-IP prioritizes installation resiliency through various efforts including, resilient energy and water supply systems, efficient and sustainable infrastructure, carbon sequestration, and sustainable land management.

The ACS-IP states that the strategic outcome of Line of Effort 1 (Installations) will result in installation "resilience and sustainability by adapting infrastructure and natural environments to climate change risks." To achieve this objective, both the current and projected impacts of climate change on the Chesapeake Bay will be taken into account in the Army Chesapeake Bay Strategy.

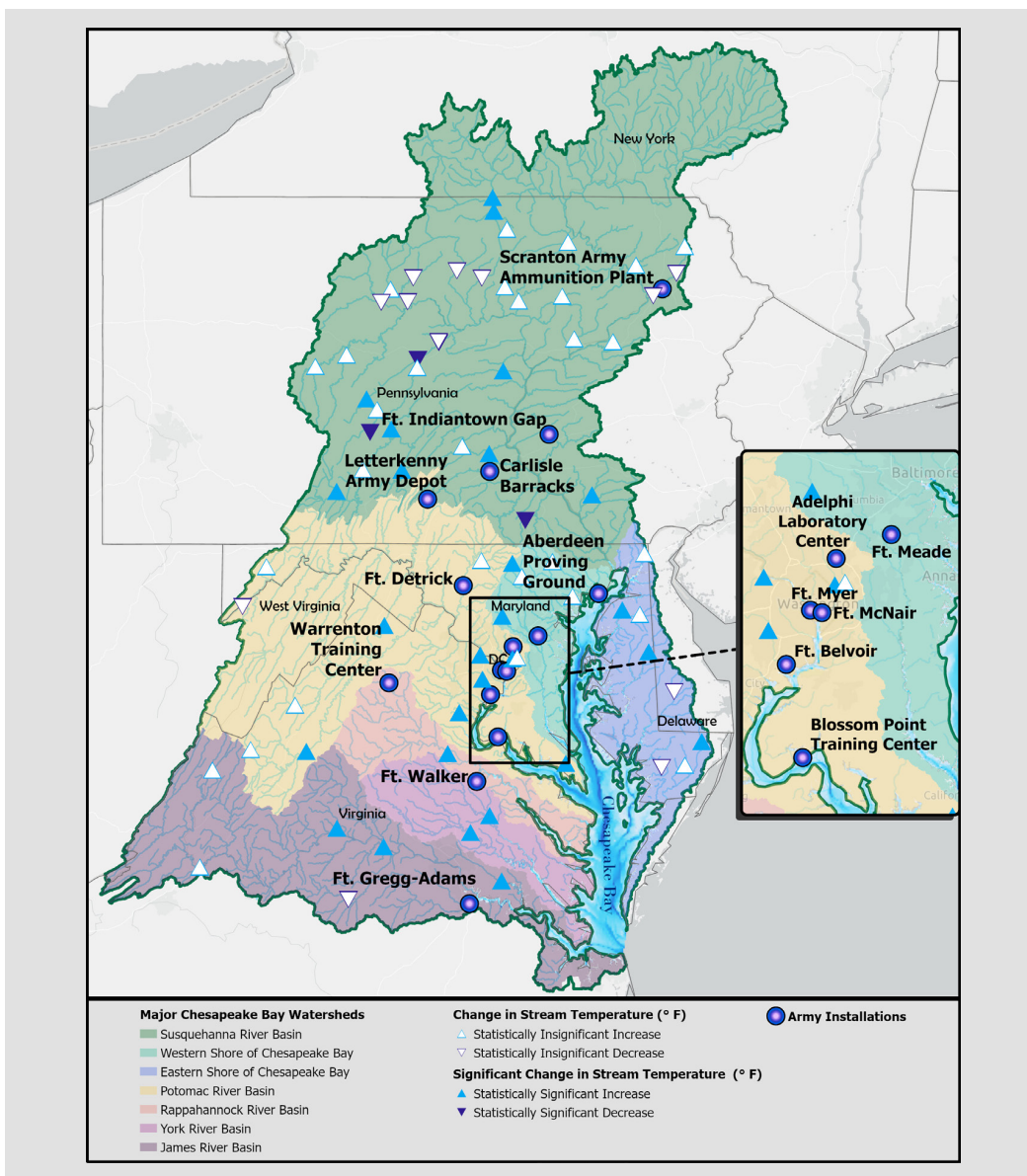


Current Climate Change Impacts to the Chesapeake Bay

Chesapeake Bay summer water temperatures are increasing by nearly a 0.5°F per decade and rising nearly twice as fast as global surface ocean water temperatures². The average annual surface water temperature in the Bay has warmed by 1.3°F since the late 1980s.

Streams and rivers throughout the watershed are warming as well. According to the U.S. Geological Survey, average annual stream temperatures have increased by 1.1°F in the past six decades in the Chesapeake Bay watershed³.

Summertime water temperatures near the surface now often exceed 85°F. Hypoxic “dead zone” waters near the Bay bottom limit how deep fish can go to seek cooler water. Conditions have changed so dramatically that in 2021 the Maryland Department of Natural Resources instituted a two-week closure⁴ on fishing for striped bass in July (when water quality and temperatures are most stressful) to limit mortality⁵.



Chesapeake Bay Watershed Stream Temperature Changes 1960-2014. Data source - Chesapeake Bay Program.

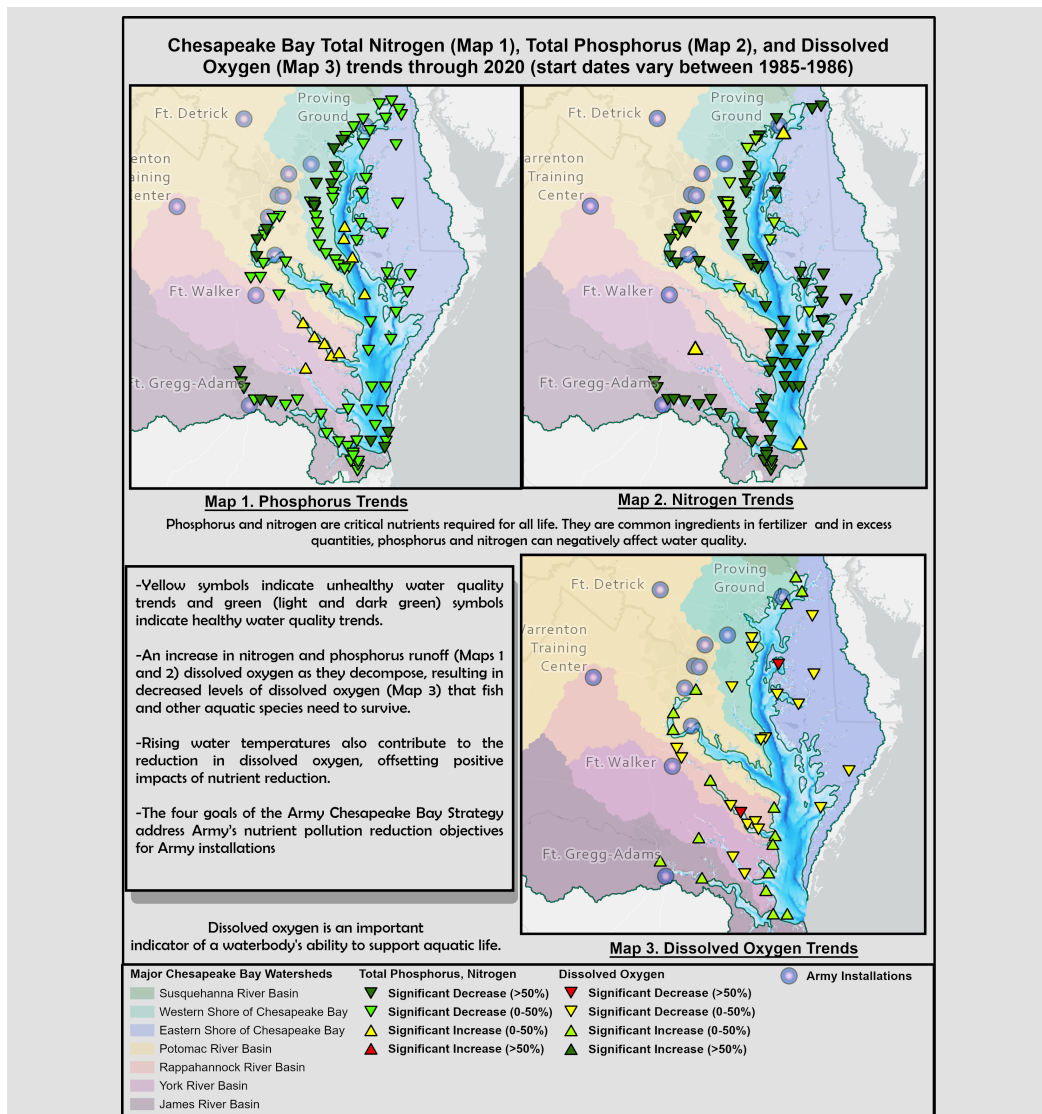
Ecological Impacts of Increased Water Temperatures

Warmer waters have a decreased capacity to hold dissolved oxygen, resulting in overall lowering of dissolved oxygen (hypoxia) in Bay waters. Higher temperatures increase the growth rate of algae. When this factor is coupled with high nutrient inputs from the watershed, large algal blooms occur. As blooms progress, decomposing algae consumes more dissolved oxygen, leading to anoxia and causing fish kills and dead zones in the Bay.

In the annual Dead Zone Report Card, the Virginia Institute of Marine Science (VIMS) announced that the 2021 Chesapeake Bay dead zone covered

an average of 1.5 cubic miles during the summer, slightly larger than most recorded in the past 36 years (67%). Overall, the 2021 dead zone lasted for 141 days—46 days longer than 2020⁶.

In addition to higher temperatures, climate change has led to increased rainfall in this region which increases soil erosion, sewer overflows, and polluted runoff. These processes increase nitrogen, phosphorus, and sediment flowing into rivers and the Bay which further exacerbate algal blooms and dead zones⁷.

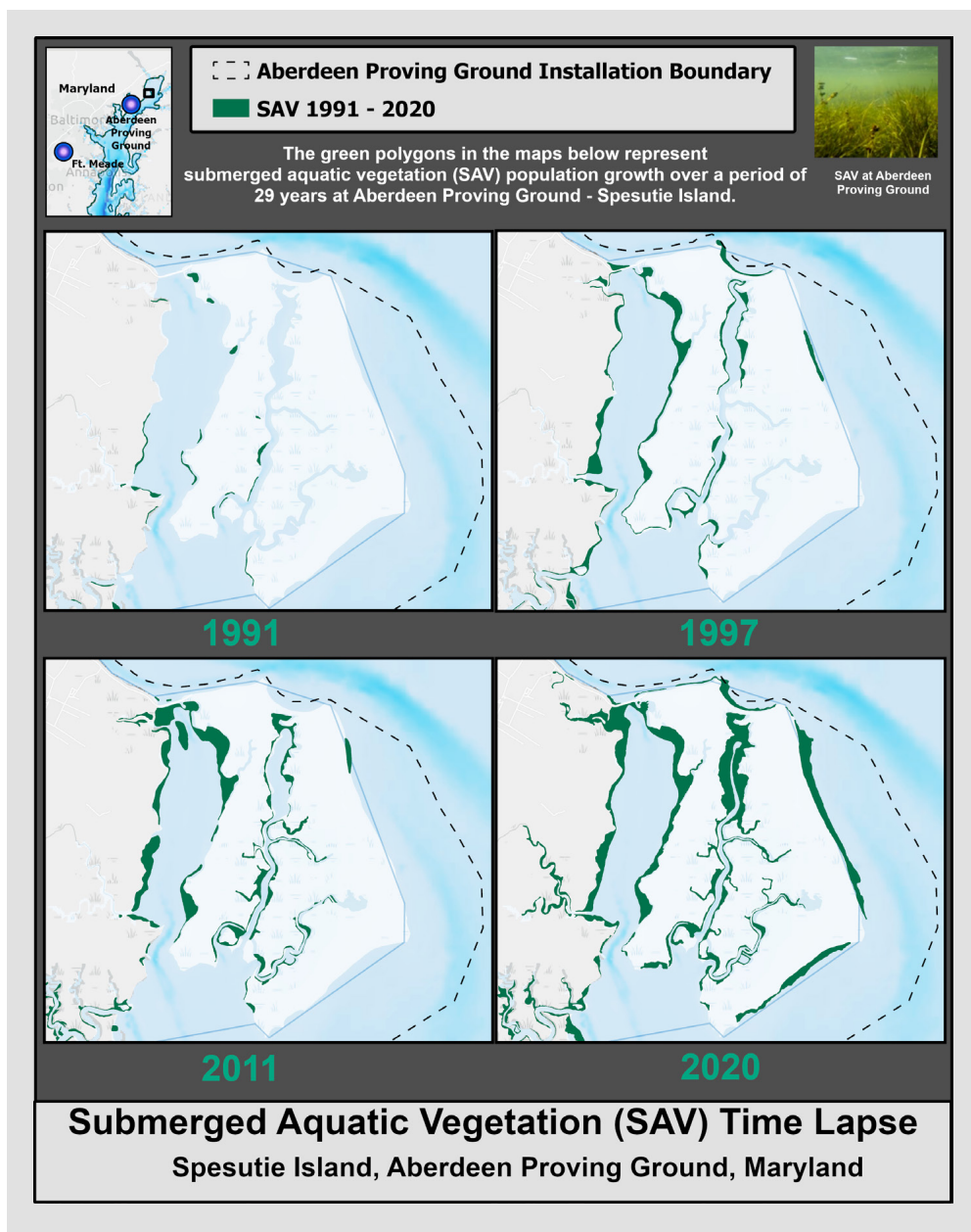


Chesapeake Bay Total Nitrogen, Total Phosphorus, and Dissolved Oxygen trends through 2020 (start dates vary between 1985-1986). The Chesapeake Bay tidal water quality monitoring program is carried out in partnership with Maryland, Virginia and EPA. Water quality parameters are measured at over 100 stations at least once a month. Data source - Chesapeake Bay Program Integrated Trends Analysis Team

Future Climate Change Impacts to the Chesapeake Bay

Climate change will cause the Bay to function very differently in the future. Likely changes include: (1) an increase in coastal flooding and submergence of estuarine wetlands; (2) an increase in salinity variability on many time scales; (3) an increase in harmful algae; (4) an increase in hypoxia; (5) a reduction of eelgrass, the dominant submerged aquatic vegetation in the Bay; and (6) altered interactions among trophic levels, with subtropical fish and shellfish species ultimately being favored in the Bay^a.

The Chesapeake Bay is particularly vulnerable to these changes because many of its native plants and animals are already at the edge of their temperature range. For example, eelgrass, an underwater grass that currently dominates much of the lower Bay, is at the southernmost edge of its range. As Bay temperatures increase, there are likely to be marked decreases of eelgrass—a critical habitat for fish, crabs, and many other Bay species.



An important environmental indicator of overall estuary health - submerged aquatic vegetation (SAV): This time-lapse of SAV at Aberdeen Proving Ground - Spesutie Island shows growth and loss over time. Changes in turbidity (cloudiness of the water), nutrient loads (nutrients entering the bay over a given period of time), available sunlight, and salinity (dissolved salt content of the bay) affect SAV health and productivity, leading to periods of growth and loss. SAV, also called underwater grass, was once plentiful in the Chesapeake Bay. It is a critical component of a healthy ecosystem. Aberdeen Proving Ground is committed to track SAV-related projects and restoration, as it is unique among Army bases because of its proximity to the Chesapeake Bay and several major Bay tributaries, making the health of those waterways a greater responsibility for the installation. This Chesapeake Bay Foundation feature layer was created using VIMS SAV data (accessed 10/17/2022) for years 1991-2020.



Stormwater retrolifting project at Fort Gregg-Adams, VA. (Photo credit: U.S. Army)

Coastal wetlands improve water quality, dissipate storm surges, and provide wildlife habitat. Already sharply reduced in acreage, the Chesapeake Bay coastal wetlands are especially vulnerable to sea level rise due to the region's relatively flat topography, and a naturally subsiding land mass. These factors, combined with sea level rise have resulted in the Chesapeake Bay water level rising an average of 3.5 millimeters annually during the second half of the 20th century. This region can expect an additional 1.3 to 5.2 feet in sea level rise⁹ over the next century, leading to more losses of tidal wetland habitat as these areas are submerged.



Bioretention project at Fort Detrick, MD. (Photo credit: U.S. Army)

The Army will work proactively with other CBP stakeholders to mitigate climate change impacts to this vital ecosystem and incorporate best management practices in the future to support the Bay's continued function and restoration.

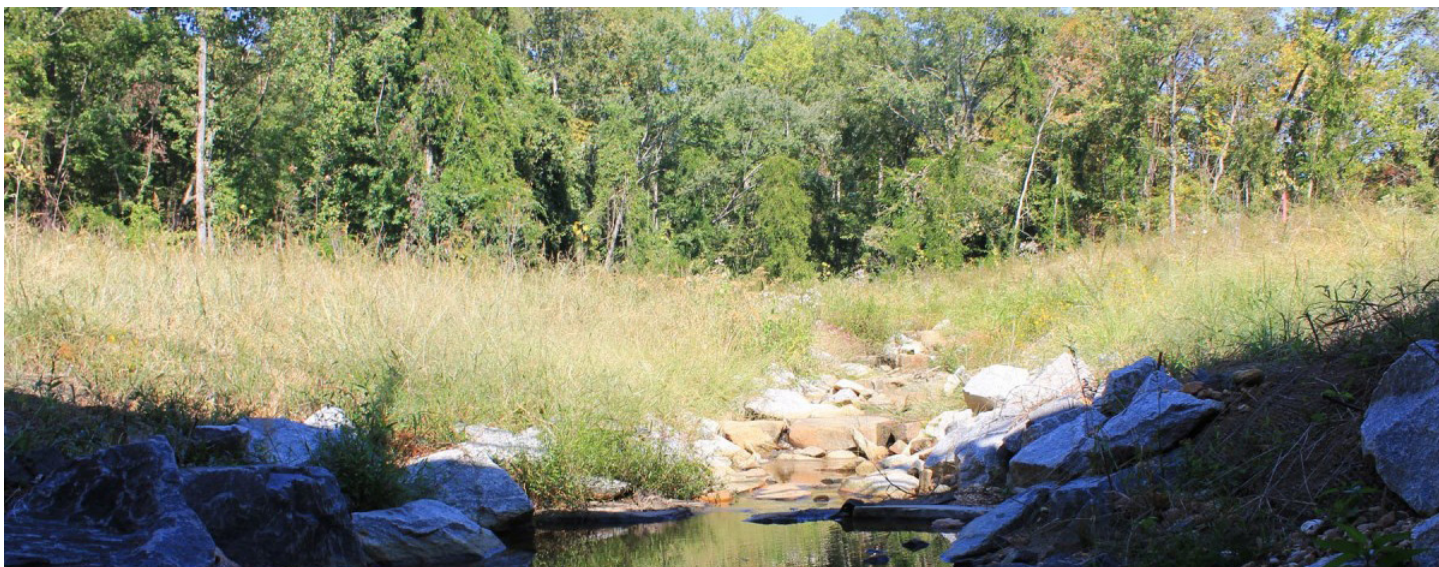
The Army and the Chesapeake Bay

The Army operates 14 major installations (see map) totaling more than 330 square miles (211,000 acres) in the Chesapeake Bay watershed, with wetlands collectively covering more than 26,000 acres. Many other smaller Army Reserve and Army National Guard facilities and activities are present in the watershed. Three installations – Fort Gregg-Adams (formerly Fort Lee), Fort Walker (formerly Fort A.P. Hill) in Virginia and Aberdeen Proving Ground in Maryland – actively use the Bay and its tributaries for training and testing in water settings.

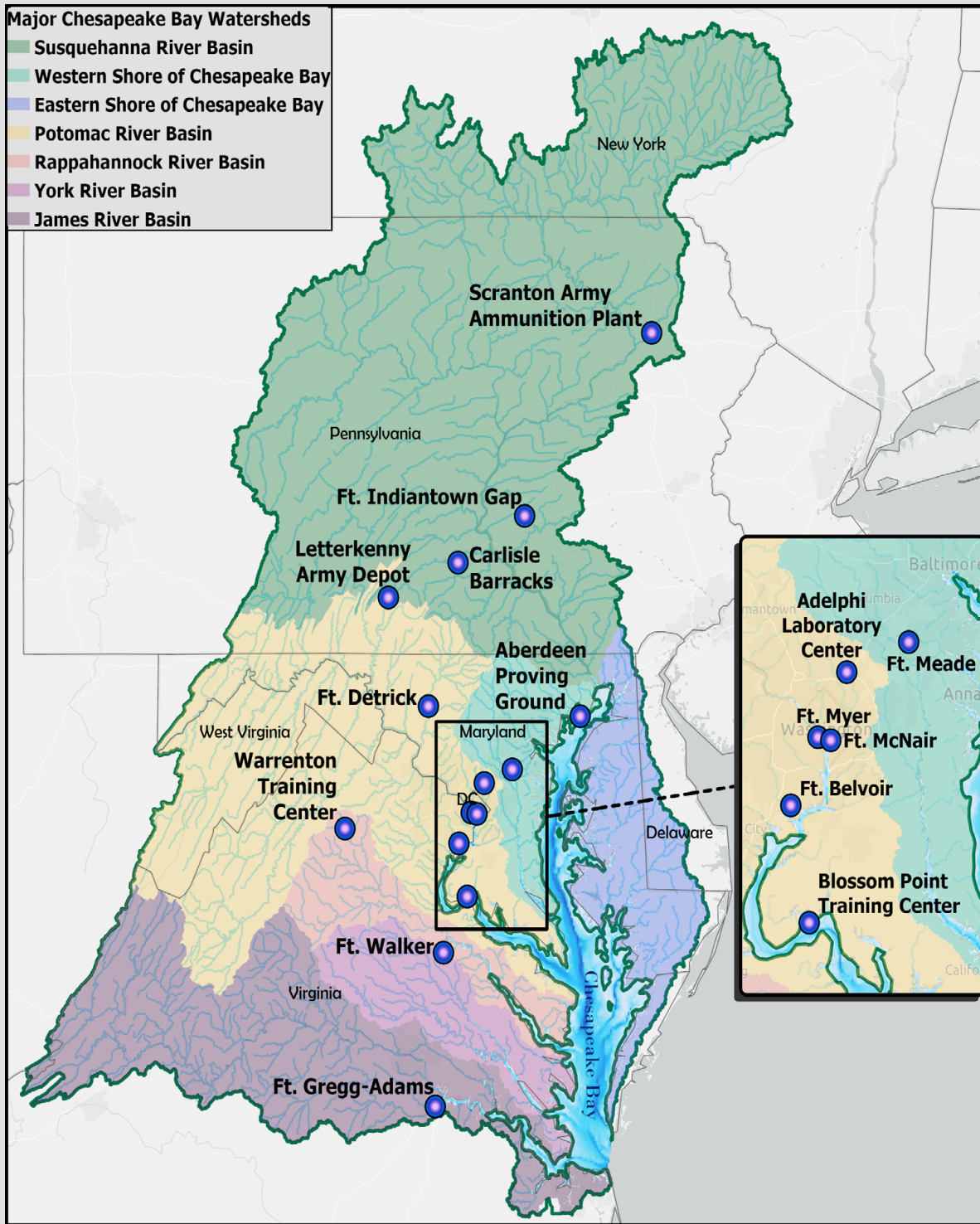
The Chesapeake Bay has been an important military asset since the Revolutionary War. Throughout our Nation’s history, the Bay and its watershed have been a food source for Soldiers, a vital military transportation route, and a platform for training Soldiers and testing military equipment and weapons systems. The Army conserves natural and

cultural resources within its installation boundaries to ensure realistic training and testing capabilities are sustained and to achieve our environmental stewardship responsibilities.

The Army also conserves natural and cultural resources outside its installations’ boundaries. Through the Army Readiness and Environmental Protection Integration (REPI) program, the Army contributes funds toward the purchase of conservation easements on private land surrounding installations to reduce or prevent incompatible land use and protect natural and cultural resources. As of fiscal year 2022, the Army and its partners have protected 763,533 acres as buffer properties throughout the United States. Of that amount, the Army and our partners have protective conservation easements on 25,330 acres around three installations within the Chesapeake Bay watershed¹.



Stream restoration project at Fort Belvoir, VA. (Photo credit: U.S. Army)

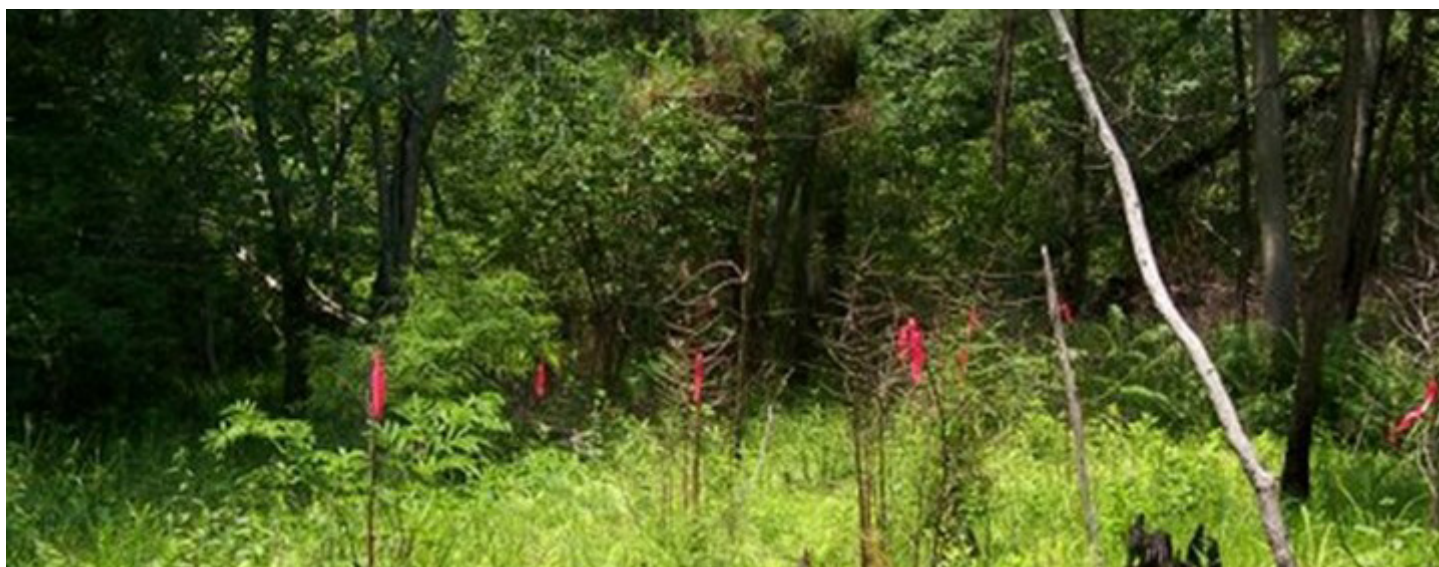


The Army operates 14 major installations within the Chesapeake Bay Watersheds. Many other smaller Army Reserve and Army National Guard facilities and activities are present in the watershed. Three installations – Fort Gregg-Adams (formerly Fort Lee), Fort Walker (formerly Fort A.P. Hill) in Virginia and Aberdeen Proving Ground in Maryland – actively use the Bay and its tributaries for training and testing in water settings.



The DeHart Reservoir project at Fort Indiantown Gap, PA supports the Army's conservation efforts and protects a critical drinking water source for the city of Harrisburg. (Photo credit: U.S. Army)

REPI has enabled the conservation of numerous natural resources across the region. In 2017, permanent protection was secured for more than 780 acres of land in Virginia as a result of Fort Walker's continued efforts through the REPI program. The protected areas include the 525-acre Davis Farm, a working farm with wetland resources and two miles of shoreline along Rappahannock River, and 200 acres of mature forested lands. In that same year, Fort Walker was awarded the 2017 Governor's Environmental Excellence Gold Award for land conservation. In 2020, the Army successfully completed the largest REPI project – the 8,000-acre DeHart Reservoir project – at Fort Indiantown Gap in Pennsylvania. Easements were conveyed to maintain 483 acres of land for unrestricted aviation training north of the installation, preserve riparian areas and wildlife habitat, and protect a drinking water source for the city of Harrisburg.



Cardinal flowers in marsh located on Fort Walker, VA. (Photo credit: U.S. Army)



The Army's partnership with the Harford Land Trust helped preserve thousands of acres at Aberdeen Proving Ground, MD. (Photo Credit: U.S. Army)

With approximately 40,000 acres of forested lands, Aberdeen Proving Ground is one of the most diverse active Army installations in the country. Through fiscal year 2021, Army REPI projects at Aberdeen Proving Ground comprised of 2,700 acres, totaling nearly \$26 million in project expenditures. Over the years the Army has collaborated with several local partners, including Harford County, Harford Land Trust, and Maryland's Program Open Space. Protected lands at Aberdeen Proving Ground have limited development, advanced the protection of endangered species such as the Bald Eagle and Northern Long-Eared Bat, as well as supported the Army mission and Chesapeake Bay restoration goals. Conserving land both on its installations and outside their boundaries enables the Army to sustain both its military mission and Bay ecosystems.

The Army remains firmly committed to its environmental stewardship responsibilities in the Chesapeake Bay watershed. The REPI program has proven to be an effective tool to preserve key environmental assets, while maintaining a forward-leaning position on mission readiness. Although considerable efforts and investments have been made by the Army and its regional partners over the last decade, much work remains to build climate resilient installations and a thriving Chesapeake Bay.

PURPOSE AND VISION



The purpose of the Army Chesapeake Bay Strategy is to integrate conservation efforts for the Chesapeake Bay into the Army's national defense activities in partnership with governmental entities, non-governmental organizations, and the community. The Strategy contains four goals and associated objectives and actions. The Strategy sets forth the Army's measurable indicators that will be monitored and assessed annually. The four goals are based on the priorities established in the 2008 Chesapeake action plan, the DoD Chesapeake Bay Strategic action plan, Executive Order 13508 (Chesapeake Bay Protection and Restoration), the 2014 Chesapeake Bay Watershed Agreement, and the 2022 Army Climate Strategy. The Army shares the 2014 Chesapeake Bay Watershed Vision of an environmentally and economically sustainable Chesapeake Bay watershed with clean water, abundant life, conserved lands and access to the water, a vibrant cultural heritage, and a diversity of engaged citizens and stakeholders.



Fort Detrick, MD stream restoration (Photo credit: U.S. Army, Mark Lewis DPW)



ROLES AND RESPONSIBILITIES

Hon. Rachel Jacobson, ASA IE&E (left). (Photo credit: U.S. Army)

The Assistant Secretary of the Army for Installations, Energy, and Environment (ASA IE&E) serves as the principal advisor to the Secretary of the Army for all matters related to installations and environmental concerns. The ASA IE&E sets strategic direction, provides oversight, and develops policies, plans, and programs for the Army environmental program and environmental initiatives. The ASA IE&E is the Department of the Army lead for the Army Chesapeake Bay Strategy and provides policy and oversight for its implementation.

The Deputy Chief of Staff (DCS) G-9 advises the ASA IE&E on development, resourcing, implementation and evaluation of strategies, policies, and programs for installations-related environmental programs. The DCS G-9 is the Army staff proponent responsible for overall implementation of the Army Chesapeake Bay Strategy. DCS G-9 is tasked with developing an annual Chesapeake Bay Action Plan (action plan) that synchronizes with this Strategy. The action plan establishes annual and quantifiable installation metrics and designates proponents within the Army responsible for implementation.

The DCS G-9 will work in close cooperation with Army commands, installations, the Army Regional Environmental Coordinator (REC) and the United States Army Environmental Command (USAEC) to implement and achieve the goals of this Strategy. The REC and USAEC ensure that the Army Chesapeake Bay Strategy and action plan are coordinated with Bay partners and advises installations and land-holding commands on implementation. The REC sustains and strengthens Bay partnerships with federal agencies, state and municipal governments, and non-governmental organizations. The REC encourages support for the Army Chesapeake Bay Strategy by sharing and publicizing the involvement and contributions of Army installations in achieving the Strategy goals. The REC also serves as an Army interface with the Department of the Navy Executive Agent for the DoD Chesapeake Bay Program, the Department of the Air Force, and our Bay partners. The USAEC provides technical oversight and coordination with state regulators to ensure compliance with Chesapeake Bay Total Maximum Daily Load (TMDL) requirements in a timely manner. The USAEC conducts technical meetings to discuss planned actions, annual reporting, and updating regulators on current and planned implementation efforts to address the Chesapeake Bay TMDL.



Members of the Letterkenny Army Depot Environmental Management Division gather for a picture on Earth Day 2023. (Photo credit: U.S. Army)

Each Army land-holding command assigns a Chesapeake Bay Program Manager to coordinate with subordinate installations and facilities in the watershed. DCS G-9 ensures that Army Chesapeake Bay Program Managers and others submit annual data for updating to the DoD CBP database, and track and report on all installation projects, accomplishments, and expenditures aimed at meeting strategy goals and action plan metrics. DCS G-9 summarizes these data and prepares an Annual Army Chesapeake Bay Progress Report. That report provides an evaluation of the Army’s Bay conservation activities, an assessment of action plan implementation, and monitors and reports on progress in meeting the Army Chesapeake Bay Strategy goals. Each installation commander is responsible for striving to achieve the applicable goals and objectives of this strategy through execution of the action plan and for reporting action plan results through their chain of command.

By October of each fiscal year, the action plan shall be completed, and resources will be programmed for execution. DCS G-9 will prepare the Annual Army Chesapeake Bay Progress Report for the previous fiscal year and provide that report to the ASA IE&E by the end of quarter one.



Pollinator-friendly wildflower patch at Fort Gregg-Adams, VA (Photo credit: U.S. Army, Dana Bradshaw, Fort Gregg-Adams)

GOALS, OBJECTIVES AND ACTION



The Army Chesapeake Bay Strategy is a science-based action agenda that contributes to the long-term climate resiliency and recovery of the Chesapeake Bay. It establishes goals and objectives that address nutrients, toxics, and sediment reduction; habitat and living resources protection; preservation and enhancement of natural carbon sequestration on installation lands; storm water management and watershed partnerships; and community outreach and engagement. The Strategy will take into account the current and projected impacts of climate change on the Bay ecosystem and will employ green infrastructure and adaptive management techniques to effectively address these impacts now, and into the future.

The four goals of this Strategy:

- Contribute to restoring and sustaining the water quality of the Chesapeake Bay and its tributaries.
- Restore and sustain living resources and healthy habitats on Army installations.
- Strengthen storm water management practices and maintain healthy watersheds.
- Foster Chesapeake Bay stewardship.

To achieve the four goals of the Army Chesapeake Bay Strategy, the Army installations will program funding and strive to attain the subordinate objectives and actions to the maximum extent feasible with the available resources.



GOAL 1. Contribute to restoring and sustaining the water quality of the Chesapeake Bay and its tributaries.

Objective 1.1. Reduce point and nonpoint source water pollution.

Actions:

- Minimize pollution from nitrogen, phosphorus, and total suspended solids from all point sources, including those associated with agriculture, construction, turf, golf courses, recreation, and developed lands.
- Operate and maintain the Army's green infrastructure assets in accordance with established pollution prevention standards and best management practices (BMP).
- Ensure compliance with all discharge permit requirements and employ regulator-approved strategies such as permeable pavement, rain gardens, and constructed wetlands to minimize runoff from installations.

Objective 1.2. Buffer stream and shoreline riparian areas to minimize erosion and reduce nonpoint source water and air pollution.

Actions:

- Protect and sustain existing riparian areas and shorelines, using nature-based strategies whenever possible.
- Establish native vegetation where needed in riparian areas and shorelines to minimize erosion, filter storm runoff, create habitat, and enhance natural carbon sequestration.



GOAL 2. Restore and sustain living resources and healthy habitats on Army installations.

Objective 2.1. Preserve, maintain, restore, and increase wetland habitats.

Actions:

- Increase acreage and enhance the function of wetlands consistent with mission requirements.
- Consider the gradual conversion of upland areas to tidal wetlands, as lowland areas become submerged by sea level rise.
- Prioritize land management options that maintain and enhance natural carbon sequestration.

Objective 2.2. Maximize the occurrence and distribution of native submerged aquatic vegetation (SAV) to enhance habitat and natural carbon sequestration.

Actions:

- Maintain beds of existing native SAV.
- Support establishment of new SAV beds in suitable habitats on or adjacent to areas that historically supported SAV.

Objective 2.3. Reduce invasive species.

Actions:

- Determine prevalence of invasive species.
- Monitor and control invasive species that pose the greatest threat to Bay conservation efforts and the Army mission.



GOAL 3. Strengthen storm water management practices and maintain healthy watersheds.

Objective 3.1. Incorporate and implement green infrastructure principles into installation watershed planning, master planning, installation design guides, and site plans. Account for projected climate change risks in new development and adapt existing infrastructure to mitigate climate risks as noted in the ACS.

Actions:

- Incorporate low impact development (LID) designs into appropriate Army plans and processes.
- Identify and monitor effectiveness of Army LID projects.
- Support development of and participation in emerging ecosystem services banking and trading opportunities within the Bay watershed.

Objective 3.2. Reduce storm water runoff and promote infiltration in developed areas.

Actions:

- Apply conservation landscaping principles and practices at Army construction sites and in existing developed areas.
- Minimize the percentage of impervious surface on developed portions of installations.
- Implement storm water best management practices in response to current and emerging requirements.

Objective 3.3. Partner and participate in conservation initiatives outside Army boundaries.

Actions:

- Participate in local watershed planning, management, and restoration initiatives.
- Use the REPI program to obtain conservation easements on property outside Army installations consistent with mission requirements.



GOAL 4. Foster Chesapeake Bay stewardship.

Objective 4.1. Increase awareness and support for Army Chesapeake Bay Strategy and ensure that Army CBP Managers and others are informed on CBP goals, commitments, and funding opportunities.

Actions:

- Continue outreach program for Army installations in the Chesapeake Bay watershed and increase awareness of local conservation projects and the importance of environmental stewardship in meeting the Army mission.
- Provide ongoing, timely, and relevant program information and materials to Chesapeake Bay Program Managers and others.
- Obtain resources to facilitate implementation of the Army Chesapeake Bay Strategy.
- Sponsor the Army CBP workshop.
- Establish an Army Chesapeake Bay Stewardship Award program for installations, facilities, activities and individuals in the Bay watershed.

Objective 4.2. Encourage support for the Strategy by fully capturing, reporting, and publicizing the involvement and contributions of Army installations in achieving the Strategy goals.

Actions:

- Develop the annual action plan by 1 October of each fiscal year.
- Implement the action plan and account for projects, accomplishments, budget submittals, and expenditures for implementation.
- Prepare the annual Army Chesapeake Bay Progress Report by the end of quarter one of each fiscal year, reporting Army progress made in the preceding fiscal year in meeting the Strategy and action plan.
- Ensure continued public access for educational and recreational purposes to the extent possible consistent with the military mission.

Commitment to Protecting the Chesapeake Bay

The Army's commitment to protecting and conserving the integrity of the land and water on which it trains and tests in the Chesapeake Bay watershed has been well documented and demonstrated over five decades through formal agreements, studies, projects, and partnerships with federal, state, and local agencies and non-governmental organizations (see Appendix A. Army Chesapeake Bay Conservation Accomplishments 2016-2023).

In a region that has lost roughly 58% of its original undeveloped forested lands to development and inundation, Army installations provide an important service by preserving thousands of undeveloped, forested acres and wetlands in the Bay watershed and protecting them from future development. Army forests help ensure climate resiliency since they are enduring terrestrial carbon sinks in the Chesapeake Bay watershed that help remove greenhouse gases from the atmosphere. These forests also protect water quality in the Bay by capturing and filtering rainwater before it reached the estuary. Additionally, five of the major Army installations in the Bay watershed have initiated long-term sustainability planning that includes alternative energy sources and greater energy efficiency, more efficient use of fuels, and alternative/hybrid fueled vehicles that will also help to reduce the Army's overall carbon footprint.

Looking forward, the Army will build on past efforts and focus on further implementing the Army Chesapeake Bay Strategy. The following list contains examples of new and existing commitments and accomplishments that Army installations have made toward protecting and conserving the Chesapeake Bay watershed.

- Multiple LID projects
- Chesapeake Bay education programs
- Shoreline restoration
- Nutrient management plans
- Hunting education program
- Regional sediment management
- Watershed studies and wetland surveys
- Submerged aquatic vegetation research and demonstrations of invasive species monitoring
- Clean marina programs
- Fish passage
- REPI program



Fort Detrick, MD stream restoration (Photo credit: U.S. Army)

Looking Ahead

The Army Chesapeake Bay Strategy contains actions that will enhance climate change adaptation and mitigation for Army installations in the Bay watershed. Protecting and sustaining riparian buffer zones and forested areas, increasing and enhancing wetlands, encouraging native SAV, reducing invasive species, and reducing nutrient pollution and stormwater runoff are essential components of the Army's Chesapeake Bay ecosystem management efforts. These actions, along with the Army's sustainability planning initiatives, help build regional capacity to adapt to and mitigate the effects of climate change which preserves Army mission capabilities in the region.

The Army relies heavily on the services that ecosystems provide, including wetlands for flood control, grasslands and riparian areas for water filtration and water quality, and forests for climate regulation. The Army also recognizes the importance of these ecosystem services in providing and maintaining a realistic natural landscape on which Soldiers can effectively train and test.

In the Chesapeake Bay watershed, increased development has placed added pressure on Army installations to protect the values of their comparatively intact ecosystems. The Army is increasingly concerned about the influx of plastic pollution accumulating in the Bay that impact water quality and the resilience of aquatic species to live and thrive under altered conditions. These challenges, coupled with the Army's growing and more complex mission requirements, has prompted the Army to look for new and innovative ways to manage ecosystems on its installations.

Looking ahead, the Army will continue the value of ecosystem services in the context of innovative solutions such as banking, crediting, and trading of ecosystem values (credits and offsets) on and off Army installations. A broad-spectrum ecosystem market for the Bay watershed could expand the marketplace for mitigation banking and credit trade in ecosystem services such as carbon emissions, forestland conservation, endangered species habitat conservation, nutrients, water quality, and wetlands.

Existing federal authorities allow some participation by the Army in wetland mitigation and conservation banking programs. These programs can provide the Army with flexible alternatives and greater conservation benefit outcomes. Banking and trading in a broad spectrum of ecosystem services represents an emerging opportunity that, combined with the Army's ongoing efforts to reduce pollution, improve water quality, protect habitat, and conserve natural resources, may further assist in improving the health of the Chesapeake Bay.

Conclusion

Lessons learned from concerted actions to improve the health of the Bay indicate that a more collaborative approach and accelerated efforts, at a system-wide watershed level, could result in greater success. As the organizational structure of the Bay partnership continues to evolve, it is expected that the changes will accelerate overall improvement in the key indicators of Bay health. The Army will engage with the CBP organizational structure and participate in strategic planning to ensure that the Army Chesapeake Bay Strategy and the action plan synchronize with current and emerging priorities.

Progress toward restoration of the health of the Chesapeake Bay will require renewed stewardship commitments, as represented by the Strategy and will depend on the support and partnership at all levels from federal agencies, state and local governments, non-governmental organizations, and the private sector. The Army is a committed partner in this critical effort to protect, restore and sustain the health, heritage, biodiversity, and economic value of this Nation's largest estuarine ecosystem. Through this Strategy and our continued cooperative efforts, the Army believes that the Chesapeake Bay vision we share with our partners will be achieved.

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APPENDIX A.

ARMY CHESAPEAKE BAY

CONSERVATION ACCOMPLISHMENTS 2016 - 2023

GOAL 1. Contribute to restoring and sustaining the water quality of the Chesapeake Bay and its tributaries.

- Fort Belvoir (VA) implemented three stream stabilization projects at sanitary sewer and water line crossings, which restored more than 1,000 linear feet of riparian buffer to help trap and filter sediment before flowing into Bay tributaries (2016).
- Fort Gregg-Adams (VA) converted 3.25 acres of existing grass on the installation's two golf courses to a species of grass that requires less water, fertilizer, and pesticide. Annual herbicide and pesticide applications have been reduced from 20 to 7 per year, and overall water use has been reduced by 25% (2017).
- At Arlington National Cemetery (VA), more than 1,900 linear feet of degraded streambank were restored to ease streambank erosion, reconnected the stream to its original floodplain, and restored the balance of flow and sediment in the stream (2017).
- Aberdeen Proving Ground (MD) completed construction of a submerged gravel wetland that treats almost 35 acres of urban land. The BMP was retrofitted from an existing dry pond to a submerged gravel wetland. The practice was selected based on site characteristics and the need for increased nutrient removal. Since the wetland was completed, inspectors have noted wildlife, including deer, blue herons and frogs, congregating around the pond (2018).
- Aberdeen Proving Ground (MD), in cooperation with the U.S. Geological Survey, addressed sea level rise and storm effects on wetlands and low-lying areas for climate preparedness and resilience. The installation installed six surface elevation tables to measure changes in water level. The data was utilized to provide more accurate estimates of potential sea level rise. The installation would also undertake further monitoring with sensors mounted to pre-installed brackets to assess the time, extent, and magnitude of storm surge during extreme weather (2019).
- Fort Walker (VA) replaced 12 drainage culverts at the end of their design life. The infrastructure improvements re-established stream flow to the installation's 6,291 acres of wetlands and allowed passage for local fish species. The culvert program also prepares the installation's infrastructure to handle future climate conditions, particularly increased flooding and water flow. These efforts contribute to the objectives of the installation's Integrated Natural Resources Management Plan (INRMP) and Watershed Management Plan (2020).

GOAL 2. Restore and sustain living resources and healthy habitats on Army installations.

- Controlled burns conducted on 3,380 acres at Fort Indiantown Gap (PA) minimized the potential of wildfires caused by training munitions, protecting the forest buffer throughout the installation that provides habitat to native species and vegetation which protects streams discharging to Bay tributaries (2016).
- More than 4,000 acres of agricultural land, forest, and wetlands surrounding Fort Indiantown Gap (PA) were protected from incompatible land uses from nearby urban areas. The conserved land is within important bird migration areas of the Kittatinny Ridge ecosystem, preserves critical habitat for protected species, and protects working farmland that benefits the local community (2016).
- Aberdeen Proving Ground (MD) conducted surveys of Northern Long-Eared Bats (NLEB) across the installation's 40,000 acres as part of the INRMP. The NLEB is federally listed as a threatened species under the Endangered Species Act (2017).
- Letterkenny Army Depot (PA) planted 2,500 trees in an area damaged by Hurricane Sandy. Several thousand acres of trees were knocked down during the storm, which left the area vulnerable to wildfire and erosion. The plantings helped reduce erosion, improve water quality, and increase thermal cover for wildlife (2017).
- Aberdeen Proving Ground (MD) protected 2,146 acres of forest, agricultural land, wetlands, and shorelines through the REPI. The protection of this land limits development within the installation's high operational noise area, supporting mission and Chesapeake Bay restoration goals. Additional benefits of this land conservation include the protection of Bald Eagle habitat, Maryland Critical Areas, forests, and wetlands (2020).
- The REPI program at Fort Indiantown Gap (PA) protected 483 acres of land through five projects, including the final portion of the 8,000-acre DeHart Reservoir project. The DeHart Reservoir project is the largest REPI project completed at an Army National Guard. These easements maintain unrestricted aviation training north of the installation, preserve riparian areas and wildlife habitat, and protect a drinking water source for the City of Harrisburg (2020).
- Fort Indiantown Gap (PA) created 7.5 acres of forest buffers and enhanced nine acres of existing riparian areas. The removal of dead plants and invasive species from the existing buffers created open space for the expansion of trees and associated habitat into an adjacent mowed field. The project contributes to the installation's goals to maintain natural areas for military training, improve habitat and streams, and enhance the visual landscape (2020).
- Fort Gregg-Adams (VA) maintains 40 acres of open grassland which is home to numerous wild sedges and wildflowers. This land hosts one of the densest populations of grasshopper sparrows, a declining species, in the Mid-Atlantic region. To create focal points of pollinator species for observers, the installation has begun converting two acres of this grassland in patches to pollinator-friendly habitat. Though this project is only partially complete, staff have already seen notable increases in pollinator species in these patches with particularly high response from monarch butterflies surrounding the newly planted milkweed (2021).

- Fort Walker (VA) manages 750 acres of open area habitat for species conservation. The installation both disperses seeds to promote native pollinator-friendly plant growth and uses a combination of prescribed fires, tilling, and mowing to combat invasive species and promote native warm season grasses. These practices help maintain an early successional habitat that is home to a multitude of species, including birds such as the bobwhite quail and grasshopper sparrow, and pollinators such as the American bumblebee and the migratory monarch butterfly (2021).

GOAL 3. Strengthen stormwater management practices and maintain healthy watersheds.

- At Fort Gregg-Adams (VA), a project was implemented to address stormwater pollution at multiple sites throughout the garrison. The BMPs implemented at these sites included porous pavement, infiltration trenches, dry swales, and grass channels. For example, the health center consisted of several buildings and parking areas with 12.8 acres of impervious surface runoff. The BMPs implemented at this site included dry swales, perimeter sand filters, and pocket sand filters. The pollutant reductions from these sites meet 100% of the Virginia Chesapeake Bay TMDL reductions outlined in the Virginia Municipal Separate Storm Sewer System Permit (MS4) and the Fort Gregg-Adams TMDL action plan (2016).
- In 2012, Camp Fretterd Readiness Center (MD, Army National Guard) was issued a new wastewater permit with stricter ammonia limits. The existing septic system could not meet the new requirements. As a result, the installation constructed the Camp Fretterd Wastewater Treatment Plant. The completed plant now receives and treats wastewater to the required standards before the treated effluent is discharged to groundwater (2018).
- The roofing membrane of the Scranton Army Ammunition Plant (PA) utilizes 2.23 acres of roof space to capture rainwater and deliver it to three 23,688-gallon storage tanks. The collected rainwater is used as make-up water for the production cooling tower. Future projects will redirect additional roof drains to the rainwater collection system. These additional tie-ins will add 30,000 square feet of collection space and capture approximately 16,000 gallons of additional rainwater from a one-inch rain event (2019).
- Joint Base Meyer-Henderson Hall (VA) completed the construction of four small-scale structural BMPs: permeable pavers, a small two-tiered bioswale, a bioretention area, and bioswales in and near multiple parking areas. The installation partnered with the USACE to conduct annual BMP inspections to evaluate their performance and maintenance needs. The inspection program allows BMP deficiencies to be promptly identified and addressed, ensuring ongoing treatment of stormwater runoff (2019).
- To reduce pollution and comply with its MS4 permit requirements related to the Chesapeake Bay TMDL, Fort Detrick (MD) restored 3,200 feet of Shookstown Creek. The restoration re-aligned the stream channel to accommodate a wider floodplain. The old channel will receive stormwater from two nearby wet ponds, creating a treatment train to increase pollutant reductions and increase storage capacity before it enters the main creek. The project treated an equivalent of 62 impervious acres, making a significant contribution to Fort Detrick's TMDL and MS4 permit goals (2020).

- Fort Gregg-Adams' (VA) Integrated Training Area Management (ITAM) program utilizes U.S. Department of Agriculture designed BMPs to control water quality runoff from its 26 miles of tactical vehicle trails and 5.1 miles of dismounted maneuver trails. In the past year, the tactical vehicle trails were upgraded to articulated concrete, which provides stable ground for vehicle passage without increasing Fort Gregg-Adams' impervious land cover. Additionally, the ITAM team applies a 4-inch layer of wood mulch generated from the installation's forestry and grounds maintenance operations to stabilize these dismounted maneuver trails on a bi-annual cycle. This practice prevents trail erosion and diverts an estimated 2,000 tons of wood debris from landfills (2021).
- To reduce stormwater pollution and comply with its MS4 permit requirements related to the Chesapeake TMDL, Adelphi Laboratories (MD) implemented a project to retrofit a pond into a submerged gravel wetland. Storm runoff drains into the wetland and percolates through the submerged gravel layer. The new system is expected to far exceed current stormwater pollution standards once it begins operating, and can reduce sediment loads in stormwater by 80%, phosphorus levels by 66%, and nitrogen levels by 56% (2023).

GOAL 4. Foster Chesapeake Bay stewardship

- Fort Gregg-Adams (VA) partnered with the City of Petersburg to celebrate Earth Day by beautifying Patton Park along the Appomattox River. Approximately 100 volunteers came together to clean multiple park sites, plant wildlife and pollinator plants, and install two rain gardens that capture stormwater runoff and reduce the amounts of pollutants discharging into the river (2016).
- Permanent protection was secured for more than 780 acres of Virginia land as a result of Fort Walker's continued efforts through the REPI and REPI programs. The protected areas include the 525-acre Davis Farm, a working farm with wetland resources and 2 miles of shoreline along Rappahannock River, some of which includes 200 acres of mature forested wetlands. Fort Walker was also awarded the 2017 Governor's Environmental Excellence Gold Award for land conservation (2017).
- On National Public Lands Day, Fort George G. Meade (MD) engaged volunteers to provide needed maintenance for stormwater BMPs and educate event attendees about stormwater pollution. Volunteers also replaced plants that had died due to weed proliferation with new Black-eyed Susan and switchgrass (2017).
- U.S. Army garrison Adelphi Laboratory Center Blossom Point Research Facility (MD) hosted a Becoming an Outdoor Woman White-tailed Deer Hunting Workshop. This two-day event gives women introductory experiences and instruction on deer biology, tracking, and tree stand and firearms safety, helping to increase the connection between the surrounding land and the event's attendees (2017).
- The Letterkenny Army Depot (PA) natural resources office, in conjunction with the Letterkenny Rod and Gun Club, organizes volunteer groups to support natural resources projects. The program began over 50 years ago to support fish and wildlife management on the installation. Between July 2018 and June 2019, 367 volunteers donated 11,676 hours in support of the natural resources program. Volunteers are granted additional access to hunt and/or fish to thank them for their service (2019).

- Approximately 5,000 hunting and fishing visits occur at Letterkenny Army Depot (PA) each year. These trips include annual hunts for the Wounded Warriors organization and Hunt of a Lifetime, an event for children with life-threatening illnesses. Each year, the installation provides a presentation about the hunting program, hunting safety practices, and information on the natural resource program. Coordination among the directorates ensures the hunting program does not impact the installation's mission (2020).
- Fort Indiantown Gap's (PA) REPI program protected 205 acres of land through two projects. Each year, the installation and its partners select targeted REPI projects based on several factors, including military mission priorities and secondary conservation benefits. The easements purchased maintain unrestricted aviation training east of the installation, prevent incompatible development around the installation, preserve riparian areas along a portion of Monroe Creek, and protect working agricultural land. The conservation of these parcels was assisted by the installation's external partners, the Ward Burton Wildlife Foundation, and the Ever Green Team (2021).
- Aberdeen Proving Ground (MD) conserved 400 acres of land by leveraging REPI and local partner resources. While REPI provided \$895K to fund these easements, the installation partners, including Harford County, Harford Land Trust, and Maryland's Program Open Space, provided \$9.8M towards these conservation efforts. The conserved land includes culturally significant landscapes, forested shorelines along the Chesapeake Bay, and forest interior dwelling species habitat. This land will also remove 206 development right options from the installation's operational noise corridors (2021).

APPENDIX B.

ARMY CHESAPEAKE BAY AGREEMENTS AND PARTNERSHIPS

Chesapeake Bay Agreements

In 1984, the Army officially became involved in the Chesapeake Bay restoration effort when the Department of the Army signed a joint resolution with the EPA to comply with the goals and objectives of the 1983 Chesapeake Bay agreement, which essentially established the Chesapeake Executive Council and tasked it with establishing the Implementation Committee. Soon after, the Army became a member of the Federal Agencies Committee. Since then, the signing of the 1987 and 2000 CBP agreements reaffirmed and strengthened the original commitments and increasingly integrated the Army's efforts with the activities of CBP.

The following list contains examples of new and existing commitments and accomplishments that Army installations made to protect and conserve the Chesapeake Bay watershed:

- 1984 DoD and EPA Joint Resolution on Pollution Abatement in the Chesapeake Bay. DoD and EPA jointly resolve to cooperate to enhance Chesapeake Bay pollution abatement activities.
- 1984 USACE Memorandum of Understanding (MOU) with EPA. The Army's expertise is recognized early as essential to protection and restoration efforts in the Bay watershed. The Army agrees to fully utilize capabilities to restore and protect the Chesapeake Bay consistent with goals and objectives in the 1984 Chesapeake Bay agreement.
- 1987 Chesapeake Bay agreement. Adds goals for reducing the amount of nutrients—primarily nitrogen and phosphorus—that enter the Chesapeake Bay by 40% by 2000. (In 1992, the CBP partners agreed to continue the 40% reduction goal beyond 2000 and to attack nutrients at their source—upstream, in the Chesapeake Bay's tributaries.)
- 1987 Water Quality Assessment of DoD Installations/Facilities in the Chesapeake Bay Region. DoD publishes a seminal study under this agreement to assess the impacts of 66 DoD facilities, including Army installations, in the Chesapeake Bay watershed on water quality and living resources. The study finds that while DoD facilities were not a significant contributor to the decline of the Bay and its tributaries, DoD should join with federal and state agencies in a concerted effort to reduce the impacts of these facilities through sound environmental management and stewardship. The report emphasizes the need for ongoing monitoring of environmental impacts, control of nonpoint source runoff, and careful hazardous materials management.

- 1989 Army MOU with EPA. Provides for coordination and cooperation between the Army and EPA regarding Chesapeake Bay activities and reflects the Army commitment to utilize its capabilities and expertise toward protection and restoration of the Chesapeake Bay, consistent with the goals, objectives, and commitments of the 1987 Chesapeake Bay Agreement. This MOU supersedes the November 1984 MOU between the Army and EPA regarding the CBP.
- 1990 Cooperative Agreement between DoD and U.S. EPA. Establishes an annual reporting requirement and the Army's own Chesapeake Bay initiatives linked to the goals of the EPA's Chesapeake Bay Program. Also establishes a policy of "coordination and cooperation" between all of DoD and EPA regarding Chesapeake Bay activities (consistent with the goals, objectives, and commitments of the 1987 agreement). This supersedes the 1984 joint resolution between DoD and EPA on pollution abatement in the Chesapeake Bay.
- 1992 Chesapeake Bay Program Amendments. Recognizes the challenges in meeting the 1987 water quality goals; recognizes the need for tributary-specific strategies; establishes SAV distribution as a measure of progress; addresses the air deposition of nitrogen; and calls for exploration of non-signatory state involvement in the overall CBP.
- 1993 DoD/EPA Action Items for Chesapeake Bay Program. Further guides program initiatives between DoD and EPA, reflects current CBP strategies (1992 amendments), and provides action items that may be revised periodically to reflect current strategic goals for DoD, EPA, and CBP.
- 1994 Agreement of Federal Agencies on Ecosystem Management. The Army, in partnership with the CBP, agrees "to reform and protect the ecological integrity, productivity and beneficial uses of the Chesapeake Bay system." It signs formal agreements to be part of the CBP to help manage public lands, support state implementation through cooperative programs, and bring a broad range of expertise in land, water, air, and living resource management to the restoration efforts.
- 1998 Federal Agencies' Chesapeake Ecosystem Unified Plan. Creates new opportunities for federal agencies to work with states to carry out the commitments of the Clean Water action plan, Conservation Reserve Enhancement Program, Environmental Quality Incentives Program, Wetlands Reserve Program, and Unified Watershed Assessments/Action Plans. Requires biennial reporting for all stated goals. This effort supports the restoration of the Chesapeake Bay living resources and their habitats by fully implementing fish and wildlife conservation efforts and all habitat restoration authorities on all federal lands; develops an annual list of priority projects; and establishes demonstration sites for wetlands, riparian, fish passage, aquatic reef projects, and invasive species control. Strongly emphasizes nutrient management plans, integrated pest management, federal facilities assessments, Businesses for the Bay, drainage areas with fish consumption advisories, and pollution from stormwater (restore "swimmable" waters). Partnerships include Partners for the Chesapeake: Protectors of Priority Watersheds; Stewards of the Bay's Living Resources and Habitats; Leaders in Nutrient and Toxics Prevention and Reduction; Guardians of Human Health; Providers of Research, Assessment and New Technologies; and Supporters of Smart Growth.
- Chesapeake 2000. Agreement guides restoration activities throughout the Chesapeake Bay watershed through 2010. Provides the opportunity for Delaware, New York, and West Virginia to become more involved in the CBP partnership. These headwater states now work with the CBP to reduce nutrients and sediment flowing into rivers from their jurisdictions.

- 2000 Chesapeake Bay Restoration Act. The Army—as one of the Chesapeake Bay agreement signatories and acting through EPA—commits to a comprehensive cooperative program to achieve improved water quality and improvements in the productivity of living resources of the Bay and asks for federal support for monitoring, management, and restoration activities in the Chesapeake Bay and the tributaries of the Bay to meet goals and commitments of the CBP.
- 2005 Resolution to Enhance Federal Cooperative Conservation in the CBP. Sixteen federal agencies and the EPA signed this resolution to rededicate and commit to cooperative conservation in support of the Chesapeake Bay federal partnership.
- 2006 MOU between State of Maryland and DoD. Agreement to improve Chesapeake Bay water quality through upgrades of DoD-owned wastewater treatment facilities and implementation of nonpoint source pollution control measures on DoD property in the Chesapeake Bay Watershed.
- 2010 Chesapeake Bay Strategy action plan. Establishes measurable actions for Army installations and facilities in the Chesapeake Bay watershed to track and report progress on meeting the goals, objectives, and targets outlined in the Strategy.
- 2014 Chesapeake Bay watershed agreement (2014 Bay agreement). Guides the overall management of the CBP through 2025. The 2014 Bay agreement reaffirms regional partnerships first established through the 1983 Chesapeake Bay agreement and sets forth long-term goals and outcomes for the restoration of the Bay, its tributaries and the lands that surround them.
- 2019 Chesapeake Bay Comprehensive Water Resources and Restoration Plan (CBCP). Serves as a comprehensive and integrated water resources management plan to assist with the implementation of the 2014 Bay agreement. The agreement and associated management strategies developed by the CBP Goal Implementation Teams served as guidance in the development of the CBCP.
- 2020 Army Installation Energy and Water Strategic Plan. Establishes goals, strategic objectives, and targets to build long-term resilience, efficiency, and affordability at Army installations. The plan reflects the Army’s renewed focus on energy and water to sustain critical mission infrastructure and mitigate risks posed by energy and water interruptions.
- 2020 Army Installations Strategy. Sets long-term strategic direction for all Army bases and installations. Pursues four strategic outcomes and corresponding lines of effort to advance modern, resilient, and sustainable installations in a contested multi-domain operation battlespace, while providing quality facilities, services, and support to our Soldiers, Families, and Civilians.
- 2022 Army Climate Strategy. Establishes the strategic foundation for the Army to address climate change. The ACS recognizes that risks associated with climate change will impact the Army at all levels. It envisions a resilient and sustainable land force, and outlines goals to proactively consider the security implications of climate change in strategy, planning, acquisition, supply chain, and programming documents and processes, as well as attain net-zero Army greenhouse gas emissions by 2050.
- 2022 Army Climate Strategy and Implementation Plan. Supports the Army Climate Strategy through implementation of the Army’s enterprise-wide climate change adaptation and mitigation measures through fiscal years 2023-2027.

Army Chesapeake Bay Program Partnerships

The following organizations are partners in the Army CBP:

Federal

Department of Defense

EPA Chesapeake Bay Program

National Oceanic and Atmospheric Administration

National Park Service

U.S. Department of Agriculture, Natural Resources Conservation Service

U.S. Department of Agriculture, U.S. Forest Service

U.S. Fish and Wildlife Service

U.S. Geological Survey

State

District of Columbia Department of Environment

Maryland Department of Environment

Maryland Department of Natural Resources

Maryland Port Administration

Pennsylvania Department of Environmental Protection

Virginia Department of Conservation and Natural Resources

Virginia Department of Environmental Quality

Virginia Institute of Marine Science

Virginia Marine Fisheries Commission

Virginia Marine Resources Commission

West Virginia Department of Environmental Protection

Other Organizations

Alliance for the Chesapeake Bay

Anacostia Watershed Restoration Partnership

Atlantic States Marine Fisheries Commission

Bush River Partnership

Chesapeake Bay Commission

Chesapeake Bay Foundation

Delaware River Basin Commission

Ducks Unlimited

Gulf States Marine Fisheries Commission

Harford Land Trust

Interstate Commission on the Potomac River Basin

Maryland Environmental Partnership

Maryland Working Watermen's Association

Metropolitan Washington Council of Governments

National Aquarium in Baltimore

Natural Resources Defense Council

Oyster Recovery Partnership

Ozone Action Days through Clean Air Partners

Partners for Sustainable Facilities

Patuxent River Commission

Potomac River Fisheries Commission
Reef Keepers of Virginia
Smithsonian Environmental Research Center
Society of Military Engineers
Submerged Aquatic Vegetation Partnership
Susquehanna River Basin Commission
The Conservation Fund
The Nature Conservancy
Trust for Public Land
Upper Potomac Tributaries Team
Upper Susquehanna Coalition
Upper Western Shore Tributary Team
Virginia Outdoors Foundation
Virginia Seafood Council
Virginia Working Waterman's Association
Wild Turkey Federation



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