

Executive Order 13508

Strategy for Protecting and Restoring the Chesapeake Bay Watershed

2014-15 Milestones Progress Report

March 2015



*Developed by The Federal Leadership Committee for the
Chesapeake Bay*

Efforts to restore and protect the Chesapeake Bay were intensified with the signing of Executive Order 13508 by President Obama in May 2009, with federal agencies taking center stage in executing the *Strategy for Protecting and Restoring the Chesapeake Bay*, in May 2010. Restoration efforts have now progressed to the point the *Strategy* fostered development of a new partnership agreement, the *Chesapeake Bay Watershed Agreement*, which more closely integrates the efforts of federal agencies in concert with the tri-legislative Chesapeake Bay Commission and the seven Bay jurisdictions, including for the first time the headwater states of Delaware, New York and West Virginia as full signatories. The new *Agreement* also incorporates expanded opportunities for public input from local governments; nongovernmental organizations; academic institutions; and community groups, as well as individual citizens across the Chesapeake Bay watershed.

As we move into the new construct, this Progress Report for 2014 represents the final annual report as required by the *Strategy*, with highlights of 2015 Actions planned as well as selected highlights of progress since the 2009 inception of the Executive Order. Future tracking of federal goals will be incorporated in the Management Strategies and Workplans under the new *Watershed Agreement*.

Federal-state collaboration will remain the hallmark of the Chesapeake Bay Program (CBP), as it has been since its inception in 1983. The dedicated people of the CBP partnership live and work throughout the Chesapeake Bay watershed—64,000 square miles of varied landscapes and nearly 18 million dynamic people encompassing parts of Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and Washington, D.C. The partners and stakeholders are committed to protect and restore the Chesapeake Bay’s vibrant ecosystem for future generations.

We understand the importance of protecting and restoring the Bay and its watershed for a spectrum of reasons: providing clean water that is fishable and swimmable; restoring critical habitats needed for abundant wildlife; sustaining healthy populations of fish and wildlife; and connecting people to the Bay and the lands around it so they understand and appreciate its richness and value. These are the touchpoints which guide our restoration efforts and the foundation of federal-state partnership to be guided by the *Chesapeake Bay Watershed Agreement*.

This Progress Report for 2014 represents a collaborative effort across the federal government, in consultation with states and other partners, fulfilling the direction of the Executive Order “to ensure that federal actions to protect and restore the Chesapeake Bay are closely coordinated with actions by state and local agencies in the watershed and that the resources, authorities, and expertise of federal, state, and local agencies are used as efficiently as possible for the benefit of the Chesapeake Bay’s water quality and ecosystem and habitat health and viability.” We look forward to continuing implementing these efforts in conjunction with our CBP partners in the coming years.

Sincerely,
Federal Leadership Committee for the Chesapeake Bay
Senior Designees

Michael Shapiro, Principal Deputy Assistant Administrator for Office of Water, U.S. Environmental Protection Agency
Ann Mills, Deputy Under Secretary, Natural Resources and Environment, U.S. Department of Agriculture
Holly Bamford, Assistant Secretary for Conservation and Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce
Donald Schregardus, Deputy Assistant Secretary of the Navy, Environment, U.S. Department of Defense
Jo-Ellen Darcy, Assistant Secretary to the Army (Civil Works), U.S. Army Corps of Engineers, U.S. Department of Defense
Jeffery Orner, Chief Readiness Support Officer, U.S. Department of Homeland Security
Lori Caramanian, Deputy Assistant Secretary for Water and Science, U.S. Department of the Interior
Michael Bean, Acting Deputy Secretary for Fish and Wildlife and Parks, U.S. Department of the Interior
Kirsten Martin, Senior Maritime Safety and Security Advisor to the Secretary, U.S. Department of Transportation

Executive Summary

Signed by President Obama in May 2009, the **Chesapeake Bay Protection and Restoration Executive Order** (E.O. 13508) bolstered federal agencies' efforts to collaborate on protection and restoration of the Chesapeake Bay. To track progress, the federal agencies have been required to release an annual progress reports, released by the Federal Leadership Committee, comprised of representatives from each of the federal agencies participating in this effort. The Federal Leadership Committee is chaired by the U.S. Environmental Protection Agency and includes senior representatives from the Departments of Agriculture, Commerce, Defense, Homeland Security, Interior, and Transportation.

This progress report for Fiscal Year 2014 (FY14) will be the final report exclusive to the federal agencies. Annual reporting will now be encapsulated as part of tracking the progress of meeting the goals of the state and federal Chesapeake Bay Program (CBP) partnership's 2014 **Chesapeake Bay Watershed Agreement**, which incorporated the goals set forth in the federal agencies' *Strategy for Protecting and Restoring the Chesapeake Bay*. In FY14, significant progress was made toward achieving the goals and outcomes set forth in the 2014 Action Plan. The vast majority of these projects are carried out between federal and state agencies working through, and benefiting, the Chesapeake Bay Program partnership.

Selected 2014 progress highlights for each of the goals and supporting strategies are noted here; full details are included in the relevant sections of this report. This report also highlights some specific actions to be carried out by federal agencies as part of their 2014-2015 Milestones commitments. Additional actions are being determined through the development of the CBP partnership's Management Strategies' workplans during 2015.

In FY14, the amount that federal agencies utilized for Chesapeake Bay restoration and protection was over \$460 million. A more detailed breakdown by goal is included in Section 4 of this report. The FY15 federal agency Chesapeake Bay budget is over \$434 million. A breakdown by agency is also included in Section 4.

Restore Clean Water:

- **EPA completed assessments** of progress made toward implementation of the Bay jurisdictions' 2012-2013 two-year milestones under the **Chesapeake Bay Total Maximum Daily Load** (TMDL). EPA also evaluated and announced the jurisdictions' and federal agencies commitments for the 2014-2015 two-year milestones.
- The **Department of Defense** (DoD) took steps toward development and implementation of Best Management Plan (BMP) requirements on its facilities under the Chesapeake Bay TMDL. Installations in Virginia and Pennsylvania with current MS4 permits completed or are working to complete Chesapeake Bay TMDL pollution reduction plans using data from the **BMP Opportunity Assessments**.
- In support of Bay jurisdictions' Watershed Implementation Plans (WIPs), DoD submitted progress and historical BMP data and worked with key partners to update installation land use information and improve available tools for installations to determine/plan for future load allocations.
- EPA issued the new BayFAST tool and completed multiple training webinars in FY14. The **BayFAST tool is a scenario assessment tool used by federal agencies** and other stakeholders to plan BMPs to reduce pollutants from lands and facilities, allowing federal agencies to help jurisdiction partners in meeting their requirements under the Bay TMDL.
- The CBP Principals' Staff Committee (PSC), with representation from federal agencies and Bay jurisdictions, approved the process for a **basinwide BMP Verification Framework**. This establishes the protocol through which agency partners ensure practices, treatments and technologies resulting in reductions of nitrogen, phosphorus, and/or sediment pollutant loads are implemented and operating correctly.

- The **Lower Susquehanna River Watershed Assessment (LSRWA)** was led by an inter-agency study team authorized to analyze the movement and impacts of sediment and associated nutrient loads from the lower Susquehanna watershed, including behind the Conowingo Dam, to the upper Chesapeake Bay. The final report will be completed in 2015. The LSRWA results are leading to a reevaluation of the role of sediment in the Bay TMDL as well as helping further development of watershed modeling scenarios and sediment management strategies.
- The **Department of Transportation (DOT)** provided support for integrated housing, transportation and water infrastructure planning, as well as planning for sustainable transportation by metropolitan transportation planning organizations and state departments of transportation. DOT awarded funding to planning and construction projects in the Chesapeake Bay watershed area as part of the **Transportation Investment Generating Economic Recovery (TIGER) 2014 discretionary grant program**, including a multimodal corridor in Baltimore and a rail bridge project in Washington, a bus rapid transit project in Richmond, and multimodal facility projects in Maryland and Virginia.

Recover Habitat:

- Virginia Game and Inland Fisheries, NOAA, USFWS, American Rivers, Harvell Dam Corporation and City of Petersburg completed the removal of the Harvell Dam which resulted in the opening of more than 100 additional stream miles and contributed to over 360 miles of new habitat available for fish passage from 2011 to 2014.
- Federal and state government leaders held a **Riparian Forest Buffer Leadership Summit** in June 2014 in Washington D.C. The summit included two Under Secretaries from the U.S. Department of Agriculture (USDA) as well as chiefs of the Forest Service (FS) and Natural Resources Conservation Service (NRCS). At the summit, the USDA Farm Service Agency announced an additional **\$5 million for Chesapeake Bay states** to augment their Conservation Reserve Programs targeted at Riparian Forest Buffers.
- With funding support from the North Atlantic Landscape Conservation Cooperative, the **U.S. Fish and Wildlife Service (FWS) contracted for development of a pilot habitat prioritization model for Eastern Brook Trout** in the Chesapeake watershed. The CBP's Brook Trout Action Team, led by Eastern Brook Trout Joint Venture (EBTJV) experts, is assessing outputs to determine priority conservation target areas in 5 Chesapeake states. This project will develop the targeting capability needed to prioritize brook trout conservation and restoration work where restored brook trout populations are most likely to be naturally resilient to a warming climate, and where actions to conserve and restore brook trout will be most efficient, beneficial, and lasting in our changing landscape. The work will likely serve as a model to be considered for use across the entire historic range of Eastern Brook Trout, extending from the Canadian Maritime Provinces, south to the Great Smoky Mountains.
- In June 2014, DoD completed a \$350,000 stormwater treatment wetland at Naval Support Activity Dahlgren, which added approximately six acres of marsh, pools, and sculpted land features and will filter and treat 161 acres of land, helping prevent polluted runoff from entering Upper Machodoc Creek.
- In FY14, **USACE continued grading and developing wetland cells on Poplar Island** and installed tidal inlet structure for these cells to allow natural tidal flow into the wetlands. As of 2014, 177 acres of tidal wetland habitat has been restored.

Sustain Fish and Wildlife:

- In 2014, NOAA, USACE, Maryland DNR and partners continued reef construction and seed planting in Harris Creek with about 72% of work the completed. This work is **scheduled for completion in 2015**. The oyster restoration effort in Harris Creek represents the largest and most extensive native oyster restoration effort ever conducted in the Chesapeake Bay. In Virginia, tributary planning began for Piankatank and Lafayette Rivers. On-going collaborative restoration efforts between USACE, VIMS in the Piankatank River also resulted in 20 acres of reef construction.
- NOAA, the USACE, and their partners made progress towards oyster restoration in the Lafayette, Piankatank, and Lynnhaven Rivers.
- A new multi-partner effort, led by the EPA and Department of Interior (DOI) was begun to **reduce the effects of selected toxic contaminants on fish and wildlife**. Initial actions are focused on PBCs, which are the main cause of fish consumption advisories in the Bay. The U.S. Geological Survey (USGS) is working with partners to expand research to understand the occurrence and effects of addition contaminants of emerging concern on fish so management strategies can be considered in the future.
- USGS, working with partners, began efforts to assess the potential **effects of shale-gas drilling on brook trout and freshwater fisheries**. The results will be critical to document water quality and habitat changes to streams and provide implications for protecting brook populations and other freshwater fisheries.
- The USFWS, working with USGS and other partners, are constructing models to help identify priority areas for habitat restoration to support black duck populations.

Conserve Land and Increase Public Access:

- **USDA's FS and NRCS completed the final Working Land Conservation Strategy** and posted it to the [Executive Order website](#). The strategy includes an outcome to permanently protect an additional 2 million acres from 2010-2025, including 695,000 acres of high value forest land. NRCS and FS collaborated with Bay states and other partners to produce the strategy, which emphasizes the importance of protecting working lands to support environmental, economic, and community goals in the Chesapeake Bay watershed, including water quality goals and the Chesapeake TMDL. It also summarizes opportunities to strengthen working lands protection in the Bay, including recommended actions to advance these goals over the long term.
- Through the **Readiness and Environmental Protection Integration (REPI) program**, DoD continued to identify opportunities to conserve priority landscapes around installations. In FY14, six of the ten installations within the Chesapeake Bay watershed funded projects for land preservation and conservation easements. More than 5,000 acres of forests, cultural resources, wetlands and farmland have been set aside for conservation at Aberdeen Proving Ground, Fort A.P. Hill and Naval Air Station Patuxent River, with additional conservation acreage slated for Naval Weapons Station Yorktown, Fort Indiantown Gap and Naval Support Facility Indian Head.
- In 2014, **17 new public access sites were opened in the watershed and 9 new projects were funded through the National Park Service (NPS)** Chesapeake Bay Office's financial assistance program. With the addition of the 17 new sites opened this year, the total number of new sites counted towards the 300 site goal is 86. In addition, a major effort was completed on identifying new needed potential access sites and showing these sites on the GPS map viewer with 176 new potential sites added.
- The Chesapeake Conservation Partnership succeeded in securing greater Land and Water Conservation Fund allocations to the Chesapeake. Through the **Land and Water Conservation Fund**, administered by Interior and

Forest Service, the Chesapeake Bay watershed would receive \$37.8 million in FY 2016 under the President's Budget for land acquisition beneficial to Bay conservation goals. These funding levels would support acquisition of approximately 7,500 acres of land.

Supporting Strategies

- **Climate Change:** Federal agencies worked with states to develop a **climate resiliency goal in the Chesapeake Bay Watershed Agreement**, which is being supported by Federal agency actions across the region. DOI and USACE are leading assessment and restoration activities related to Hurricane Sandy recovery efforts to restore ecosystems in a manner that makes them more resilient to climate change. In January 2015, USACE completed and submitted to Congress, the North Atlantic Coast Comprehensive Study (NACCS)—a two-year effort in the wake of Hurricane Sandy intended to increase an understanding of coastal risks, promote a systems approach to risk management, and promote resilient coastal communities—The NACCS recommended nine focused study areas.
- **The USGS released a study documenting stream temperatures had risen 2.52 degrees (F) between 1960 and 2010 in the Chesapeake Bay region.** Upstream waters will become less suitable for some cool-water fish species, such as brook trout, which is a key species for restoration in the bay watershed and in the eastern U.S.
- **Citizen Stewardship:** Through NOAA, the Chesapeake Bay Program's Education Workgroup, supported the **Bay Watershed Education and Training (B-WET) program** which provided \$2.9 million in 32 grants to support place-based meaningful watershed experiences for thousands of students and teachers. This ongoing outreach plays an important role in educating Regional stakeholders.
- **Environmental Markets:** The Inter-Agency Chesapeake Bay Environmental Markets Team (EMT) sponsored a workshop to expand awareness of opportunities and promote coordination for a market-based approach to conservation in the Chesapeake Bay watershed in October 2014. There were 60-75 attendees from federal and state agencies..
- **Strengthen Science:** Federal agencies, led by USGS, worked with partners through the CBP Scientific, Technical Assessment, and Reporting (STAR) team to **develop options to sustain water-quality monitoring to support assessment of Bay conditions and improvements from the TMDL.** The options will be evaluated and actions implemented in 2015. The partners will also begin to look at ways to meet the additional monitoring needs for the new Bay Agreement.

Ongoing Commitments for 2015

In addition to the 2014 progress highlighted above, federal partners will continue meeting the commitments of their 2014-2015 Milestones. These activities are now part of the new Chesapeake Watershed Agreement and associated management strategies. Examples of 2015 commitments include:

- Ongoing wetland restoration at Poplar Island resulting in 232 wetland acres
- Completion of target goal of reef construction and oyster seed planting in Harris Creek
- Construct approximately 25-50 acres of sanctuary oyster reefs in the Piankatank River
- Additional 15 acres of sanctuary oyster reefs in the Great Wicomico River
- Completion of planning work in the Lafayette and Piankatank Rivers
- Development of a new Stream Health indicator, completion of three additional AFO/CAFO Program Assessments
- Continued implementation toward meeting the forest buffer, land conservation, stream restoration and public access goals

Federal Funding Summary

Table A summarizes the federal investment since 2011 from the eleven federal agencies on the Federal Leadership Committee on implementation of the goals and outcomes of Executive Order 13508, totaling **approximately \$2.2 billion over five years**.

Table A: Executive Order Federal Funding Summary

Department/ Agency	FY 2011 President's Budget Request ¹	FY 2012 Operating Levels ²	FY 2013 Operating Levels	FY 2014 Operating Levels	FY 2015 Operating Levels
USDA Total	\$153,578,000	\$121,488,000	\$135,449,000	\$111,014,000	\$126,725,000
Farm Service		(\$37,081,000)	\$34,304,000	\$34,304,000	\$30,200,000
NRCS	\$149,740,000	\$119,828,000	\$98,000,000	\$75,300,000 ³	\$94,000,000
Office of Chief Economist	\$150,000	\$350,000	\$350,000	\$350,000	\$350,000
USFS	\$3,688,000	\$1,310,000	\$2,795,000	\$1,060,000	\$2,175,000
U.S. Dept. of Commerce / NOAA	\$19,346,250	\$9,208,425	\$10,119,000	\$8,436,442	\$7,202,750
DoD Total	\$13532,013	\$121,254,616	\$89,106,945	\$118,855,437⁴	\$63,441,667
Services	\$7,521,000	\$101,169,616 ⁵	\$71,146,945	\$93,855,437	\$41,841,667
USACE	\$6,011,013	\$20,085,000 ⁵	\$17,960,000 ⁵	\$25,000,000 ⁷	\$21,600,000
DOI Total	\$42,817,218	\$23,906,000	\$21,227,233	\$25,758,725	\$30,725,986
FWS	\$15,161,27	\$10,146,000	\$10,294,000	\$11,553,745	\$11,070,986
NPS	\$19,169,640	\$6,411,000	\$3,876,233	\$4,515,980	\$8,466,000
USGS	\$8,486,304	\$7,349,000	\$7,057,000	\$9,689,000	\$11,189,000
EPA	\$248,873,881	\$184,010,730	\$174,821,744	\$197,504,967	\$206,301,507
Total	\$486,648,362	\$459,867,771	\$430,723,922	\$461,569,571	\$434,396,910

¹Fiscal Year 2011 Action Plan

²Fiscal Year 2013 Action Plan

³ Includes the following programs (EQIP, CStP, ACEP, CTA and CRP, CSecP, CBWP, AMA, AWEP, FRPP, GRP and WRP)

Working lands financial assistance in Chesapeake Bay watershed HUCS (source: ProTracts)

Technical assistance estimate for working lands programs proportional to total state FA to TA levels (source: FMMI)

Estimate for easement and other programs based on the percent of the state land area within the Chesapeake Bay watershed (source: FMMI)

Funding on discontinued farm bill programs is technical assistance and/or financial assistance obligations entered into before enactment of the 2014 Agricultural Act. (Around 2/7/14)

Funding is lower because of repeal of the Chesapeake Bay Watershed Initiative in the Agriculture Act of 2014 (the Farm Bill).

⁴DoD Services used budget appropriations for FY14 projects as described in their FY14 DoD Chesapeake Bay Program Annual Datacall.

⁵USACE and DoD FY12 and FY13 Operating Levels were adjusted based on actual allocations.

⁶While DOT does not make direct programmatic or base funding contributions specifically for Chesapeake Bay restoration activities, it is expected that DOT federal surface transportation programs will be used for transportation activities that support Chesapeake Bay restoration. DOT offers funding assistance to states and local transportation agencies for a broad range of surface transportation investments states and transit agencies determine what activities they will finance from formula funds through state and metropolitan transportation planning. DOT offers funding assistance to states and metropolitan areas for transportation planning. DOT also funds discretionary programs, including the transit New Starts program and TIGER program that can foster better access for people to safe and affordable transportation to jobs and services.

⁷Amounts include additional funding for Special Investigations Chesapeake Bay Program Coordination.

Setting the Pace: 2009 through 2014 Numeric Milestone Progress

Since President Obama penned Executive Order 13508, federal agencies have been driving progress toward restoring the Chesapeake Bay. Perhaps the most significant achievement since 2009 was the 2014 signing of the *Chesapeake Bay Watershed Agreement*, with goals and outcomes with their foundation in the same goals established by the federal *Strategy for Protecting and Restoring the Chesapeake Bay Watershed*. From 2010 through 2014, the eleven federal agencies on the Federal Leadership Committee have spent a **combined total of approximately \$1.8 billion on implementation of the goals and outcomes of Executive Order 13508, with an additional \$434 million planned for FY 2015, this brings the five-year federal investment for the Chesapeake Bay to over \$2.2 billion.**

Thanks in large part to the federal strategy, in progress compared to 2025 outcomes is as follows:

- As of 2013, **nitrogen loads are 27 percent of the reduction goal, phosphorus 43 percent, and sediment 37 percent**
- **Producers are 37 percent toward the goal of applying new conservation practices to 4 million acres** in high priority watersheds
- Historical fish migratory routes continue to be restored, with **more than 36 percent of the restoration goal achieved** since 2011
- New oyster metrics were developed and large scale oyster reef habitat restoration projects are underway, **including the nation's largest at Harris Creek**
- **More than 500,000 acres of land have been permanently protected from development**, about 21 percent of the land conservation goal
- Public access sites to the Bay and its tributaries have **been opened in 86 locations, nearly 29 percent of the goal** to increase public access

However, challenges remain:

- Efforts to restore riparian forest buffers to 63 percent of total riparian miles have seen **less than one percent gain to 58.6 percent**
- A new baseline target was established for adult female blue crab abundance in 2012, and in 2014 the abundance of spawning-age females fell to 68.5 million, **below both the 215 million target and the 70 million over-fished threshold**

Table B summarizes the progress for each numeric outcome contained in the Executive Order since 2010 (or outcome baseline year).

Table B. SELECTED SUMMARY OF PROGRESS BY GOAL SINCE BASELINE		
2025 OUTCOME	2010 BASELINE	CUMULATIVE PROGRESS SINCE BASELINE
<p>Water Quality: Meet water quality standards for dissolved oxygen, clarity/underwater grasses and chlorophyll-<i>a</i> in the Bay and tidal tributaries by implementing 100 percent of pollution reduction actions for nitrogen, phosphorus and sediment no later than 2025, with 60 percent of segments attaining water quality standards by 2025.</p>	<p>The baseline originally reported for this outcome was an estimate of 89 of the 92 segments of the Bay and its tidal waters are impaired in 2009.</p> <p>Improved methodology described in the next column indicates the baseline for 2007-2009 is 31% of the Bay was attaining water quality standards.</p> <p>Average long term monitoring data (1985-2013) from 9 river input stations (RIM) is 212 million pounds for N loads, 14.6 million pounds for P, and 5.2 million tons for sediment. 2009 totals for each was:</p> <ul style="list-style-type: none"> • N=133 million pounds • P=6.1 million pounds • Sediment=2.9 million tons <p>(Annual flow due to rainfall and storms affect the annual loads)</p>	<p>The percentage of the tidal waters meeting water quality standards in 2011 to 2013 is 29%. The slight decrease appears to be influenced by decreases in SAV acreage in the Upper Bay largely due to Tropical Storm Lee.</p> <p>In 2013, rivers flowing into the Bay are below the long term (1985-2013) loads at the nine stations for Nitrogen, Phosphorus, and Sediment:</p> <ul style="list-style-type: none"> • Nitrogen loads totaled 160 million pounds • Phosphorus loads totaled 10 million pounds • Sediment loads from the nine RIM sites totaled 2.7 million tons. <p>All three were below the long term average.</p>
	<p>For pollution reduction actions, the FY10 baseline is 0 percent. The universe is 100 percent goal achievement by December 31, 2025 (FY26).</p>	<p>Nitrogen = 27% of goal Phosphorus = 43% of goal Sediment = 37% of goal</p> <p>Using 2013 progress run data</p>
<p>Agricultural Conservation: Work with producers to apply new conservation practices on 4 million acres of agricultural working lands in high priority watersheds by 2025 to improve water quality in the Chesapeake Bay and its tributaries.</p>	<p>Of the approximately 8 million acres of agricultural working lands in high-priority watersheds, approximately 4 million acres are identified as having soils with the highest potential for leaching and runoff, which may affect water quality. The 4 million acre target is to apply to or expand conservation treatment on virtually all of these most vulnerable agricultural lands.</p>	<p>196,548 acres of new conservation practices applied on agricultural working lands in high priority watershed for FY14. These new acres bring the total for this measure to almost 1,467,000 acres which is 37 percent of the goal.</p>

Table B. SELECTED SUMMARY OF PROGRESS BY GOAL SINCE BASELINE		
2025 OUTCOME	2010 BASELINE	CUMULATIVE PROGRESS SINCE BASELINE
<p>Wetlands: Restore 30,000 acres of tidal and non-tidal wetlands and enhance the function of an additional 150,000 acres of degraded wetlands by 2025.</p>	<p>The National Wetlands Inventory estimates 1 million acres of tidal and non-tidal wetlands are available in the Chesapeake Bay watershed for restoration or enhancement.</p>	<p>6,098 acres of wetlands established, rehabilitated or reestablished on agricultural lands between 2010 and 2013, which accounts for 20 percent of the goal.</p> <p>Panel of wetland manager-experts has determined that current tracking and reporting systems are inconsistent and inadequate, and are working to develop better methods. For instance, only new agricultural wetlands (no other sectors) are now reported, wetland losses are not tracked, and there is currently no system to collect data on wetland enhancement. The new panel is seeking to correct this as a first priority.</p>
<p>Riparian Forest Buffer: Restore riparian forest buffers to 63 percent, or 181,440 miles, of the total riparian miles (stream bank and shoreline miles) in the Bay watershed by 2025.</p>	<p>58 percent of the 288,000 total riparian miles in the Bay watershed have forest buffers in place.</p>	<p>Since 2010, there has been a less than 1 percent gain to 58.4 percent; 1,212 miles have been restored compared to the 14,400 miles needed to meet the 63 percent outcome. Progress has slowed since the early 2000's. Federal agencies (notably EPA and USDA) launched the Riparian Forest Buffer Initiative in 2014 Bay states. The purpose of the Initiative to greatly improve restoration of forest buffers, the on-the-ground delivery, and the relevant programs.</p>
<p>Fish Passage: Restore historical fish migratory routes by opening 1,000 additional stream miles by 2025, with restoration success indicated by the presence of river herring, American shad and/or American eel.</p>	<p>2,041 stream miles in the Chesapeake Bay watershed have been opened and are accessible for fish migration.</p>	<p>From 1989 to 2014, 2,730 stream miles in the Chesapeake Bay watershed have been opened and are accessible for fish migration. This includes over 360 miles opened from 2011-2014 under the Chesapeake Bay Executive Order, 36 percent of the goal.</p>
<p>Blue Crabs: Maintain sustainable blue crab interim rebuilding target of 200 million adults (1+ years old) in 2011 and develop a new population target for 2012 through 2025.</p>	<p>A new 215 million adult female abundance target was adopted in 2012. The 2012 Blue Crab Advisory Report (from CBSAC) indicated the abundance of female blue crabs was 97 million, which is above the overfished threshold of 70 million and below the newly adopted 215 million target.</p>	<p>68.5 million spawning-age female blue crabs in the Bay in 2014; a decrease from the previous year.</p> <p>A new 215 million adult female abundance target was adopted in 2012. Blue crab populations are naturally highly variable accounting in part for the population ups and downs since 2011. The new female based abundance target allowed for fishery management measures to be adapted annually targeted at conserving female populations.</p>

Table B. SELECTED SUMMARY OF PROGRESS BY GOAL SINCE BASELINE

2025 OUTCOME	2010 BASELINE	CUMULATIVE PROGRESS SINCE BASELINE
Land Conservation: Protect an additional 2 million acres of lands throughout the watershed currently identified as high conservation priorities at the federal, state or local level by 2025, including 695,000 acres of forest land of highest value for maintaining water quality.	7.8 million acres protected watershed-wide.	As of the end of 2013, 8,371,682 acres of land has been permanently protected from development. This marks an achievement of 29 percent of the goal.
Public Access: Increase public access to the Bay and its tributaries by adding 300 new public access sites by 2025.	1,129 public access sites providing access to the Bay and its tributaries exist in the watershed.	With the addition of the 17 new sites opened in 2014, the total number of new sites counted towards the 300 site goal is 86, nearly 27 percent of the goal.

Trends

The following figures show trends in outcome progress since the baselines that were included in the 2010 Executive Order *Strategy*. For exact numeric progress, refer to Table B, Selected Summary of Progress by Goal Since Baseline.

Figure 1: Water Quality Pollution Reduction Outcome

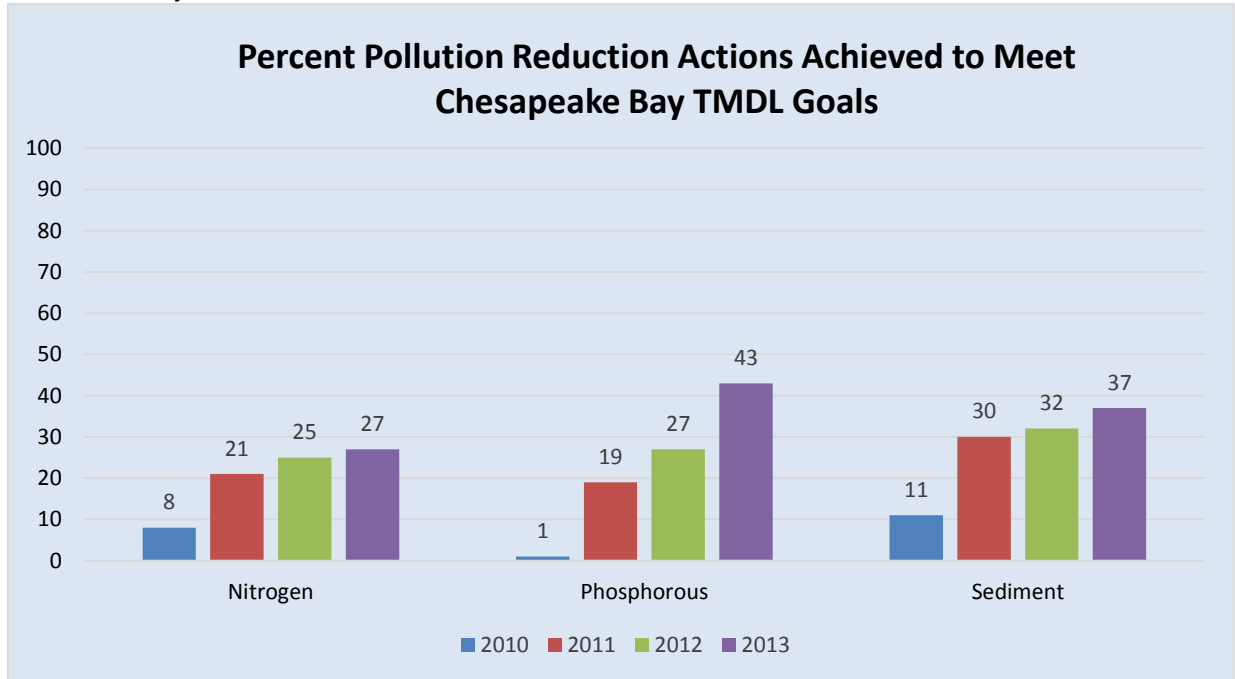
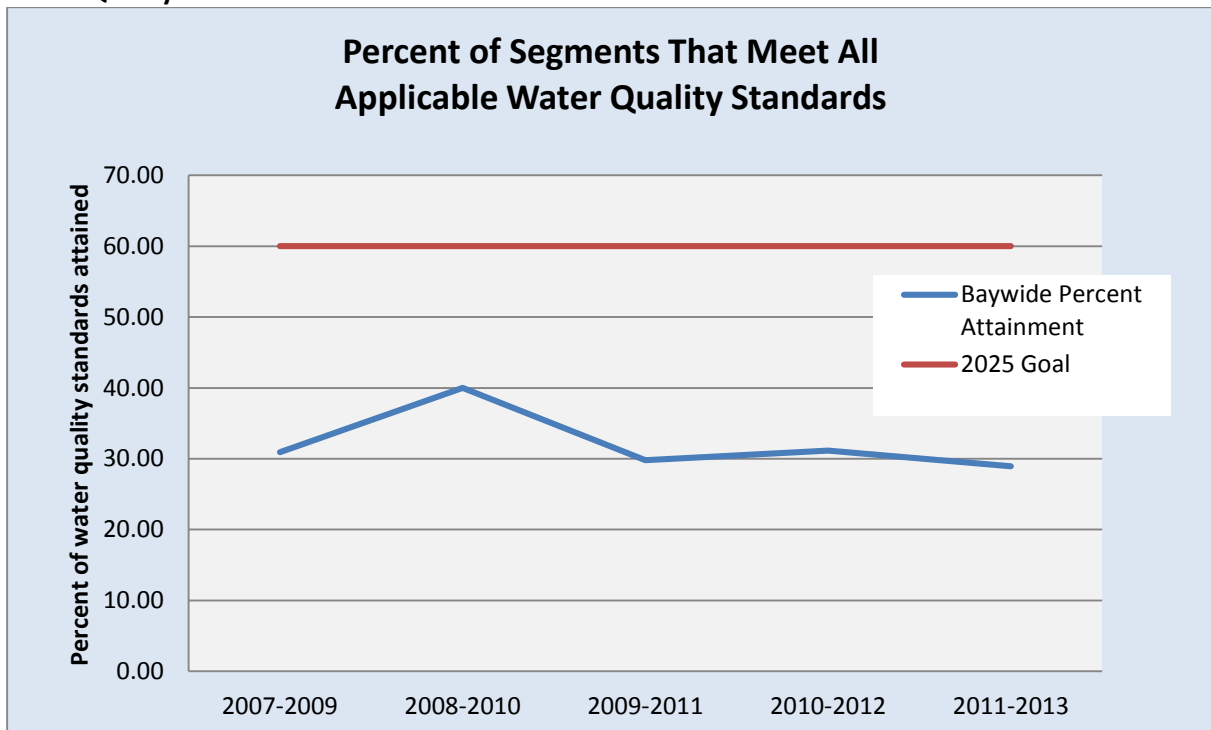


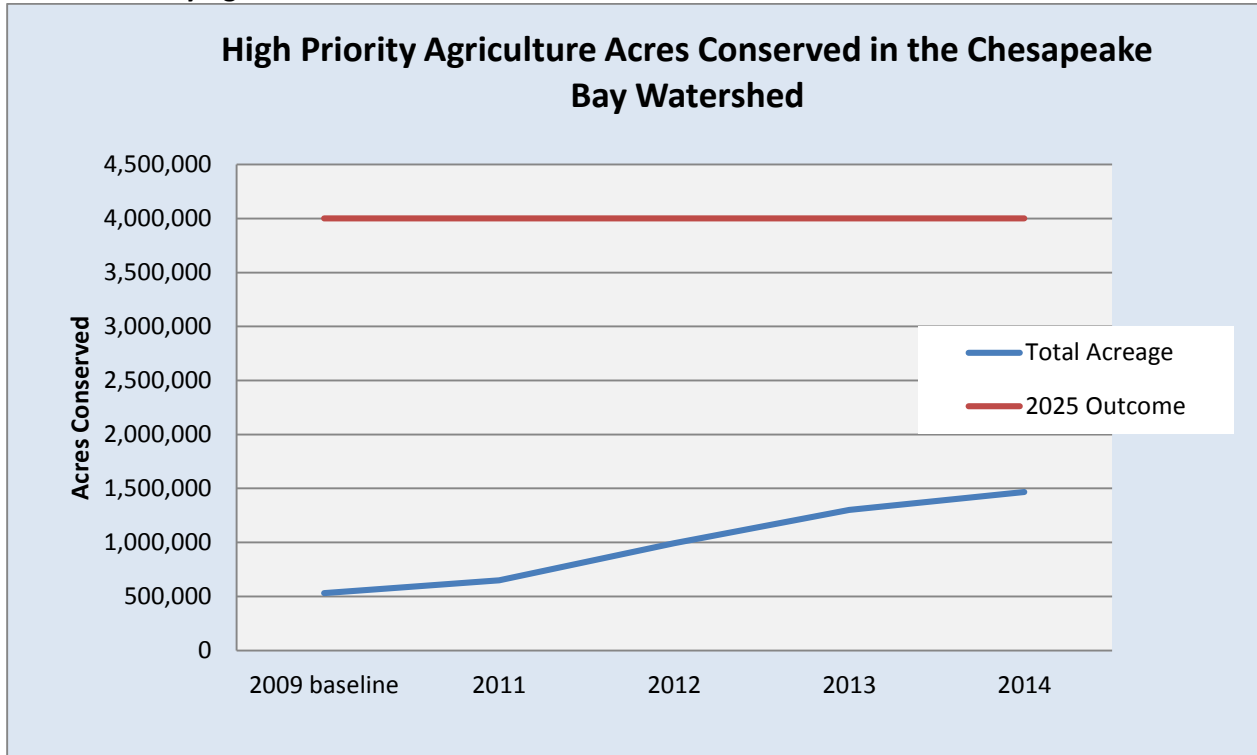
Figure 2: Water Quality Standards Attainment Outcome



Outcome: Meet water quality standards for dissolved oxygen, clarity/underwater grasses and chlorophyll-*a* in the Bay and tidal tributaries by implementing 100 percent of pollution reduction actions for nitrogen, phosphorus and sediment no later than 2025, with 60 percent of segments attaining water quality standards by 2025.

Current Status: The percentage of the tidal waters meeting water quality standards in 2011 to 2013 is 29 percent. Using 2013 data, the percentage of pollution reduction actions achieved to meet Chesapeake Bay TMDL Goals are 27 percent for nitrogen, 43 percent for phosphorous, and 37 percent for sediment.

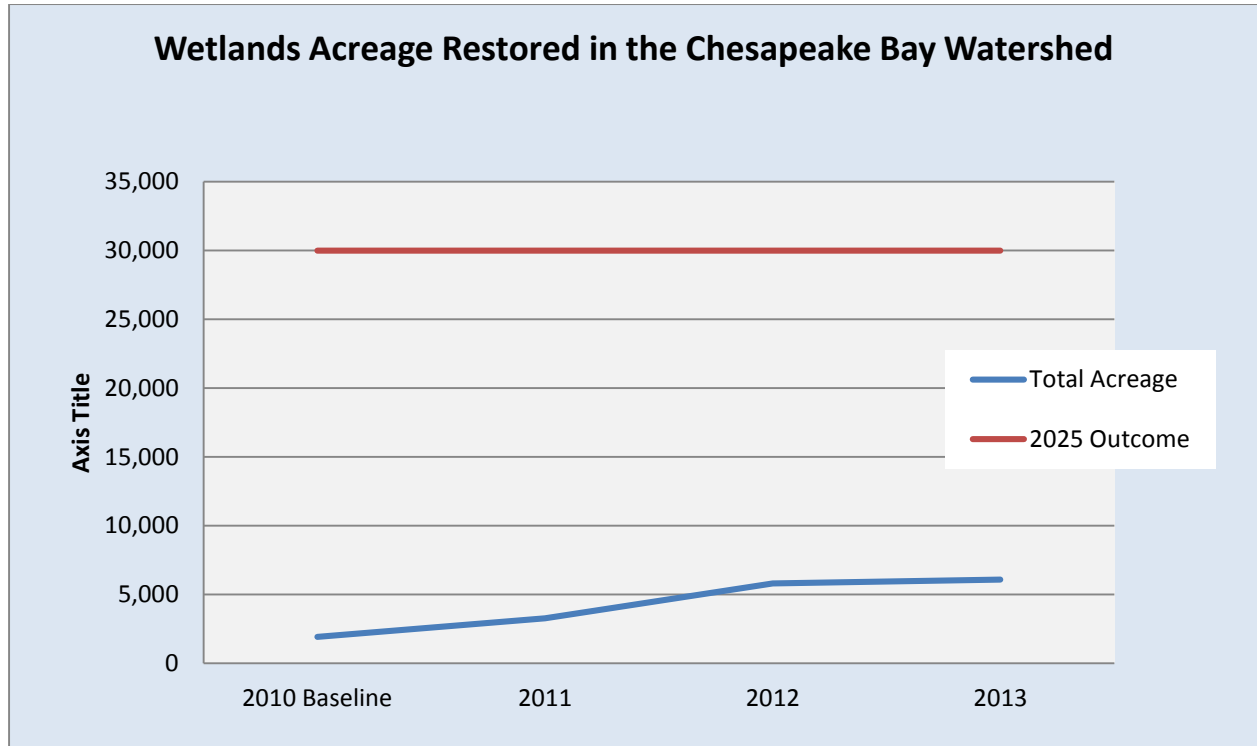
Figure 3: Water Quality Agricultural Conservation Outcome



Outcome: Work with producers to apply new conservation practices on 4 million acres of agricultural working lands in high priority watersheds by 2025 to improve water quality in the Chesapeake Bay and its tributaries.

Current Status: In 2014, 37 percent of the outcome has been achieved.

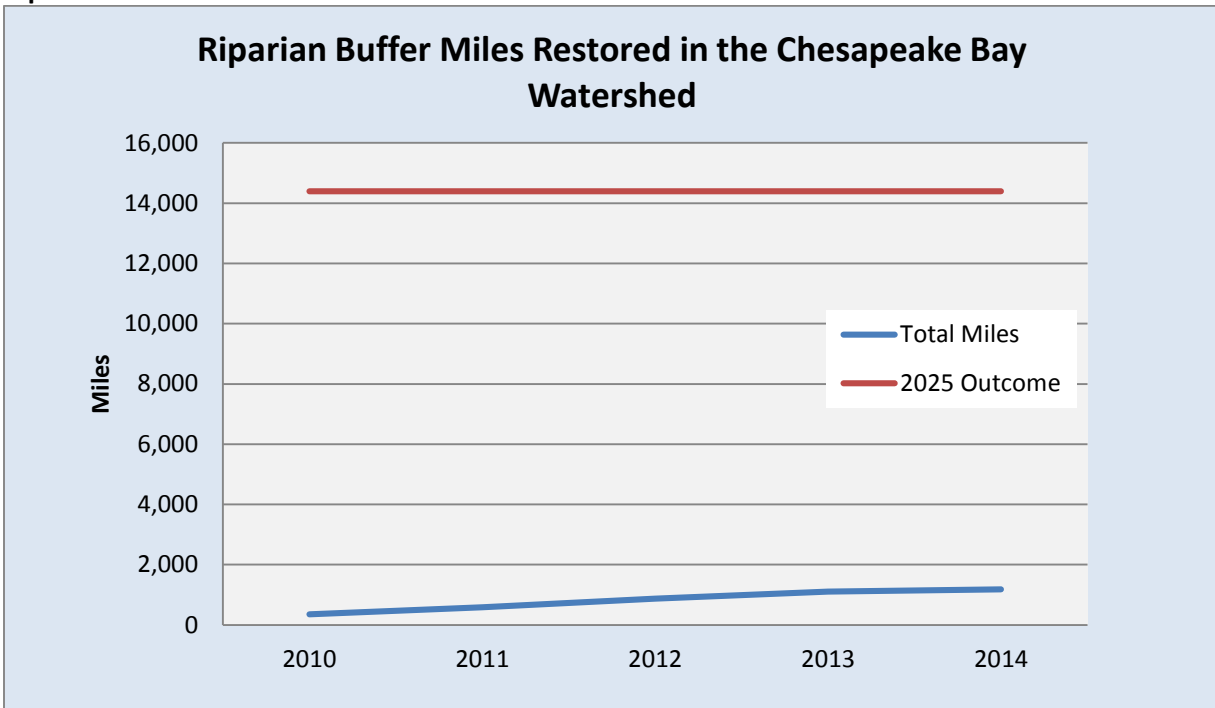
Figure 4: Wetlands Outcome



Outcome: Restore 30,000 acres of tidal and non-tidal wetlands and enhance the function of an additional 150,000 acres of degraded wetlands by 2025.

Current Status: By 2013, 20 percent of the outcome has been achieved.

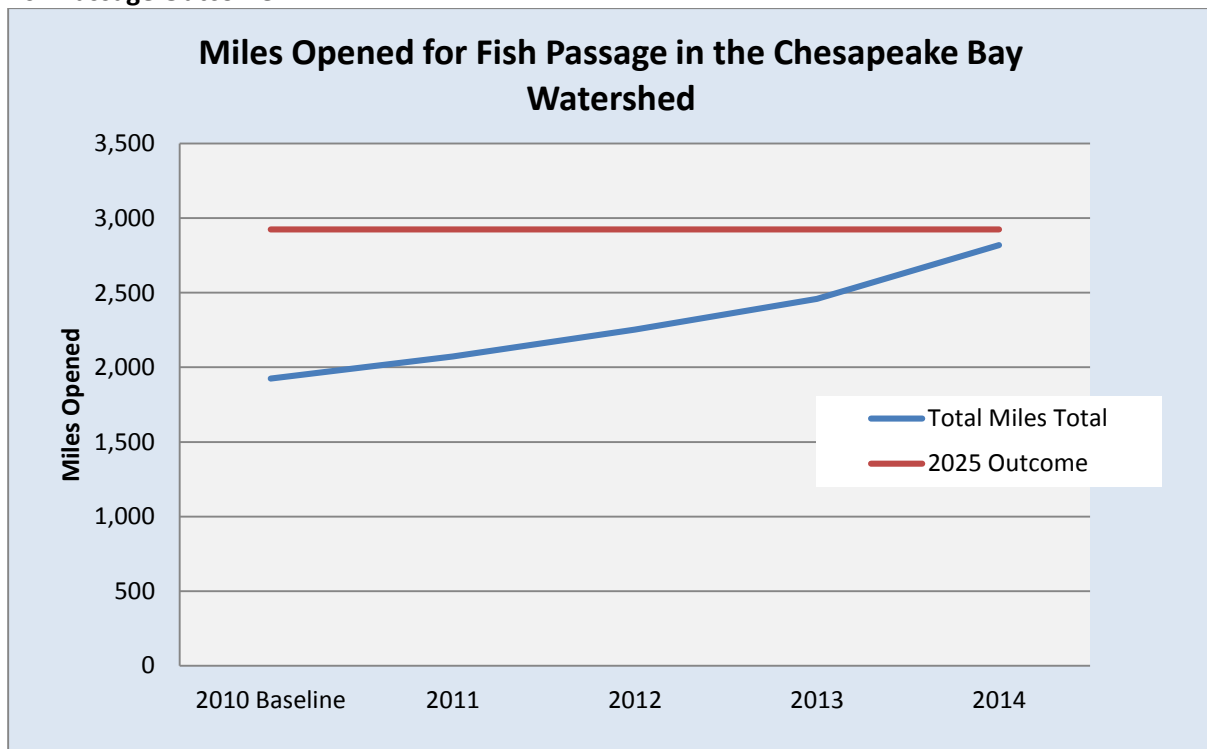
Figure 5: Riparian Forest Buffer Outcome



Outcome: Restore riparian forest buffers to 63 percent, or 181,440 miles, of the total riparian miles (stream bank and shoreline miles) in the Bay watershed by 2025.

Current Status: Since 2010, there has been a less than 1 percent gain to 58.6 percent; 1,181 miles have been restored compared to the 14,400 miles needed to meet the 63 percent outcome.

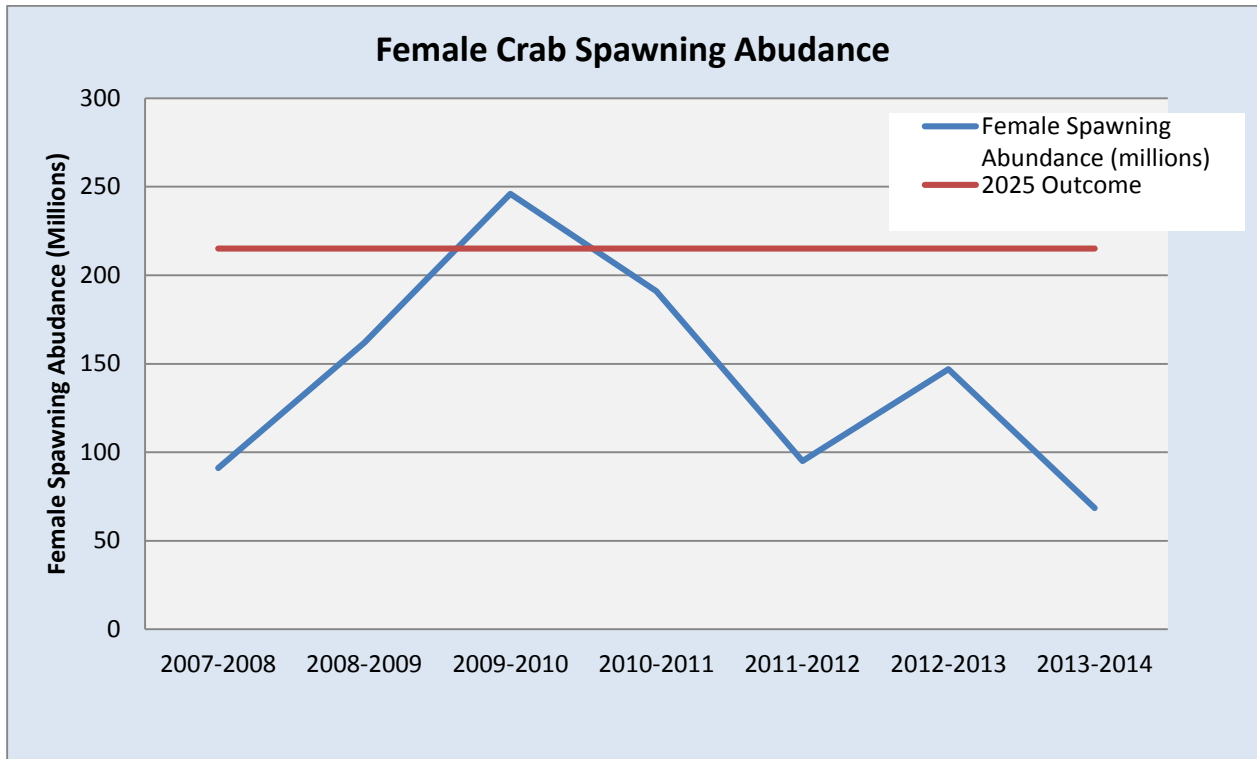
Figure 6: Fish Passage Outcome



Outcome: Restore historical fish migratory routes by opening 1,000 additional stream miles by 2025, with restoration success indicated by the presence of river herring, American shad and/or American eel.

Current Status: As of 2014, 16 percent of the outcome has been achieved.

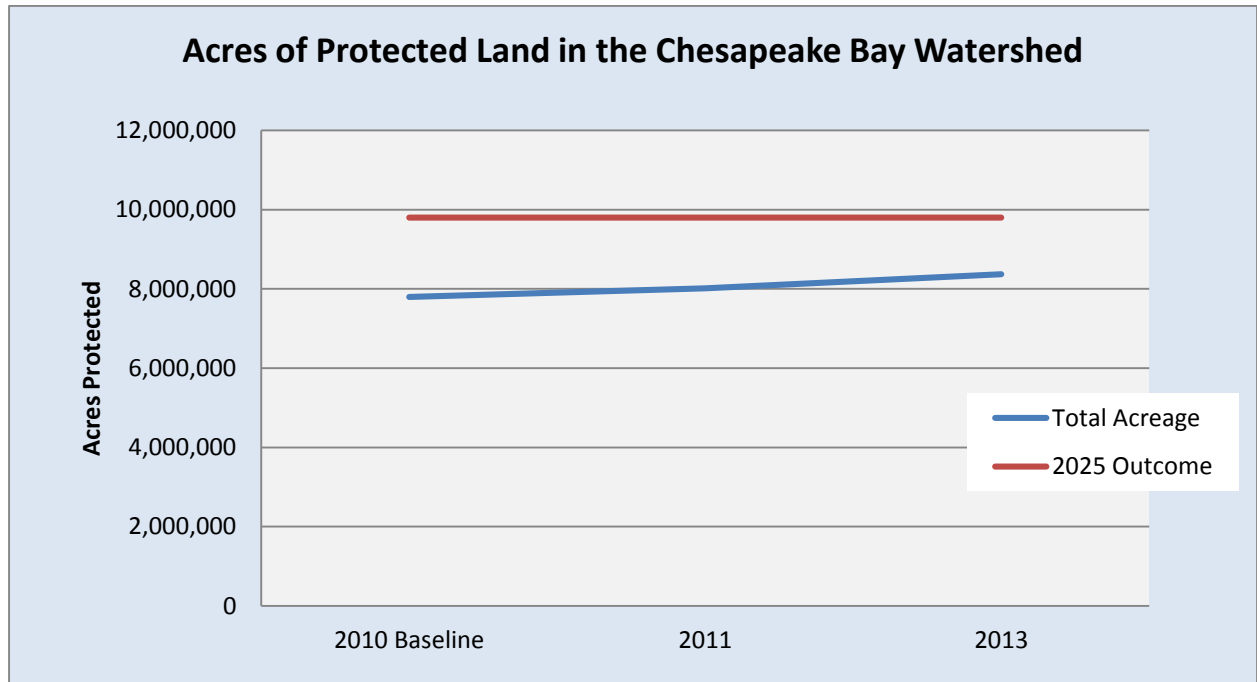
Figure 7: Blue Crab Outcome



Outcome: Maintain sustainable blue crab interim rebuilding target of 200 million adults (1+ years old) in 2011 and develop a new population target for 2012 through 2025.

Current Status: In 2014, there were 68.5 million spawning-age female blue crabs in the Bay in 2014.

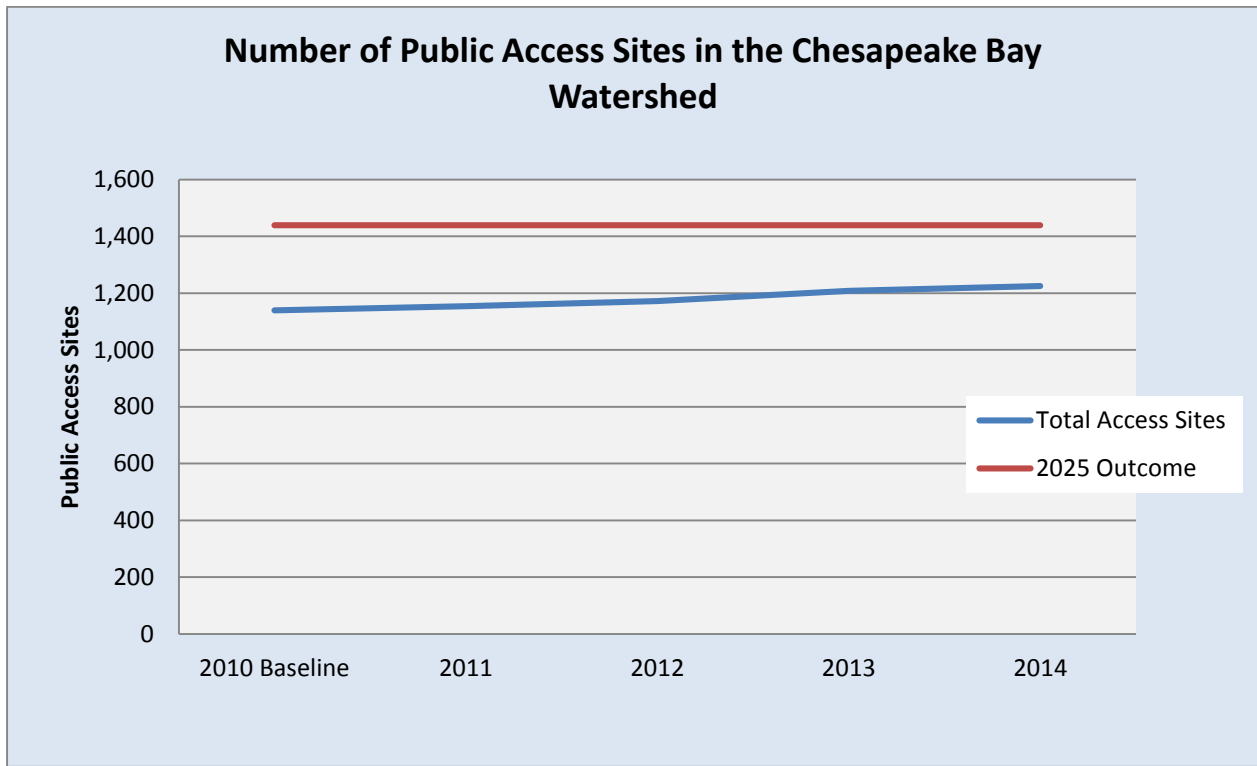
Figure 8: Protected Lands Outcome



Outcome: Protect an additional 2 million acres of lands throughout the watershed currently identified as high conservation priorities at the federal, state or local level by 2025, including 695,000 acres of forest land of highest value for maintaining water quality.

Current Status: As of 2014, 29 percent of the outcome has been achieved.

Figure 9: Public Access Sites



Outcome: Increase public access to the Bay and its tributaries by adding 300 new public access sites by 2025.
Outcome Summary: As of 2014, 27 percent of the goal has been achieved.

2014 Numeric Milestone Progress

Table C summarizes the progress made in 2014 on the numeric milestones or outcomes.

Table C. Numeric Milestones: FY 2014 Progress			
2025 Outcome	Baseline	2014-2015 Milestone	2014 Progress
<p>Water Quality: Meet water quality standards for dissolved oxygen, clarity/underwater grasses and chlorophyll-<i>a</i> in the Bay and tidal tributaries by implementing 100 percent of pollution reduction actions for nitrogen, phosphorus and sediment no later than 2025, with 60 percent of segments attaining water quality standards by 2025.</p>	<p>The baseline originally reported for this outcome was an estimate of 89 of the 92 segments of the Bay and its tidal waters are impaired in 2009.</p>	<p>This is a long term measure and contains only long term targets. The FY18 target for this measure contained in EPA’s draft FY14-18 Strategic Plan is as follows: “By 2018, achieve 45 percent attainment of water quality standards for dissolved oxygen, water clarity/underwater grasses, and chlorophyll-<i>a</i> in Chesapeake Bay and tidal tributaries. (2011 Baseline: 40 percent)*</p>	<p>2011-2013 progress is 29% of the Bay attaining water quality standards. The slight decrease from 2010-2012 level of 31% appears to be influenced by decreases in SAV acreage in the Upper Bay largely due to Tropical Storm Lee</p>
	<p>Improved methodology described in the next column indicates the baseline for 2011-2013 is 29% of the Bay was attaining water quality standards.</p>	<p>* Achievement of the 2018 target will be evaluated using monitoring data from 2015, 2016, and 2017 to assess attainment of applicable water quality standards in each of the Bay’s 291 designated-use segments. The 2011 baseline reflects monitoring data from 2008, 2009, and 2010.</p>	
	<p>For pollution reduction actions, the FY10 baseline is 0 percent. The universe is 100 percent of pollution actions in place by December 31, 2025 (FY26).</p>	<p>FY15 targets are 37.5% for N, P and S. (FY15 results will be based on 2014 progress scenario).</p>	<p>FY14 progress (based on 2013 Progress Runs) are Nitrogen-27%, Phosphorus-43% and Sediment-37%.</p>

<p>Stream Condition: Improve the health of streams so 70 percent of sampled streams throughout the Chesapeake watershed rate fair, good or excellent, as measured by the Index of Biotic Integrity, by 2025.</p>	<p>45 percent of sampled stream sites are rated fair, good or excellent.</p>	<p>Revised stream health indicator anticipated in spring 2015.</p>	<p>In progress. Stream restoration science community has determined that success indicators should be more strongly linked to stream functions, rather than simply structural features and biological resources. New baseline measurements to reflect this more thoughtful and science-based approach are necessary, as well as agreed upon methods for continued monitoring of progress. Initial work to address these needs is funded and underway.</p>
<p>Agricultural Conservation: Work with producers to apply new conservation practices on 4 million acres of agricultural working lands in high priority watersheds by 2025 to improve water quality in the Chesapeake Bay and its tributaries.</p>	<p>Of the approximately 8 million acres of agricultural working lands in high-priority watersheds, approximately 4 million acres are identified as having soils with the highest potential for leaching and runoff, which may affect water quality. The 4 million acre target is to apply to or expand conservation treatment on virtually all of these most vulnerable agricultural lands.</p>	<p>Implement conservation practices that protect the watershed's soil and water resources while maintaining productive working lands.</p>	<p>Ongoing. 196,548 acres of new conservation practices applied on agricultural working lands in high priority watershed for FY14.</p>

<p>Wetlands: Restore 30,000 acres of tidal and non-tidal wetlands and enhance the function of an additional 150,000 acres of degraded wetlands by 2025.</p>	<p>The National Wetlands Inventory estimates 1 million acres of tidal and non-tidal wetlands are available in the Chesapeake Bay watershed for restoration or enhancement.</p>	<p>Restore 4,000 acres of wetlands every two years.</p> <p>Enhance 20,000 acres of degraded wetlands every two years.</p>	<p>In progress. 287 acres of wetlands were restored on agricultural lands in 2013; 2014 acres will be reported in 2015. Panel of wetland manager-experts has determined that current tracking and reporting systems are inconsistent and inadequate, and are working to develop better methods. For instance, only new agricultural wetlands (no other sectors) are now reported, wetland losses are not tracked, and there is currently no system to collect data on wetland enhancement. The new panel is seeking to correct this as a first priority.</p>
<p>Riparian Forest Buffer: Restore riparian forest buffers to 63 percent, or 181,440 miles, of the total riparian miles (stream bank and shoreline miles) in the Bay watershed by 2025.</p>	<p>58 percent of the 288,000 total riparian miles in the Bay watershed have forest buffers in place.</p>	<p>Restore 1,800 miles of riparian forest every two years (900 miles annually) in order to achieve the goal of restoring an additional 14,440 miles of riparian forest (to get to 181,440 miles, or 63 percent) by 2025.</p>	<p>For the past year (July 2013-June 2014), approximately 111 miles of forest buffers were contracted in the watershed through the Conservation Reserve Enhancement Program (CREP) which is most used for this practice. This is a small fraction the goal but CREP was closed for signups during much of this period.</p>

<p>Fish Passage: Restore historical fish migratory routes by opening 1,000 additional stream miles by 2025, with restoration success indicated by the presence of river herring, American shad and/or American eel.</p>	<p>2,041 stream miles in the Chesapeake Bay watershed have been opened and are accessible for fish migration.</p>	<p>Reopen 132 additional stream miles with the degree of restoration success measured by the presence of river herring, American shad, hickory shad, brook trout and/or American eel. To determine degree of project success, document the presence/absence of indicator species (river herring, American shad, hickory shad, brook trout and/or American eel) at 50 percent of the completed fish passage projects. (FWS, NOAA)</p>	<p>Completed. In 2014, NOAA, Virginia Department of Game and Inland Fisheries and the Commonwealth of Pennsylvania completed projects that opened more than 150 miles for fish passage in seven streams in Pennsylvania and the Appomattox River (Harvell Dam) in Virginia.</p>
<p>Blue Crabs: Maintain sustainable blue crab interim rebuilding target of 200 million adults (1+ year old) in 2011 and develop a new population target for 2012 through 2025.</p>	<p>A new 215 million adult female abundance target was adopted in 2012. The 2012 Blue Crab Advisory Report (from CBSAC) indicated the abundance of female blue crabs was 97 million, which is above the overfished threshold of 70 million and below the newly adopted 215 million target.</p>	<p>Maintain 215 million female target</p>	<p>Approximately 68.5 million female adult (age 1+) crabs were estimated to be present in the Bay at the start of the 2014 crabbing season. This number is below the recommended target and just below the recommended threshold number of 70 million female spawning-age crabs. The estimated abundance in 2014 was lower than observed in 2012 and 2013. There is no one reason for declining adult female crab numbers. Fluctuations in population numbers are characteristic of a short lived species and blue crabs have exhibited highs and lows in the past. That said factors other than fishing pressure are likely contributing to the declines including overwintering mortality, predation on juveniles, and other environmental variability.</p>

<p>Oysters: Restore native oyster habitat and populations in 20 tributaries out of 35 to 40 candidate tributaries by 2025.</p> <p>Note: This outcome has been modified under the 2014 Chesapeake Bay Program Agreement to Continually increase finfish and shellfish habitat and water quality benefits from restored oyster populations. Restore native oyster habitat and populations in 10 tributaries by 2025 and ensure their protection.</p>	<p>There are several tributaries with ongoing restoration of oyster reef habitat.</p>	<p>Complete reef construction and planting in 1 to 2 tributaries by 2015.</p>	<p>In progress. NOAA, USACE, Maryland DNR and partners continued reef construction and seed planting in Harris Creek with about 72% of work completed. With the completion of work planned in 2015, the target goal of reef construction and seed planting in Harris Creek will be achieved. Maryland DNR began reef construction in the Little Choptank River.</p> <p>Reef construction occurred in the Piankatank River in Virginia in 2014. Additional reef construction is planned for the Piankatank and Great Wicomico Rivers for 2015.</p> <p>Draft tributary restoration plans for the Little Choptank River and Tred Avon River were completed. Draft tributary restoration plans for the Lafayette, Lynnhaven and Piankatank Rivers were initiated in 2014 and scheduled for completion in 2015. On-going and concurrent collaborative restoration efforts in the Piankatank River resulted in 20 acres of reef construction in 2014.</p>
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<p>Brook Trout: Restore naturally reproducing brook trout populations in headwater streams with an 8% increase in occupied habitat by 2025.</p>	<p>Catchment-level data collected via the Eastern Brook Trout Joint Venture's (EBTJV) 2011 reassessment is currently being analyzed and will be used to refine this outcome to a more meaningful scale.</p>	<p>Will be based on EBTJV decisions on priority projects in Chesapeake Bay drainage. Free, on-line tool will be available February 2015. Specific priorities to be identified in final Management Strategies published in June 2015. Milestone calculations to be included in Biennial Work Plan to be completed December 2015.</p>	<p>In progress. Pilot habitat prioritization model completed November 2014; action team is assessing outputs to determine priority targets in 5 states.</p>
<p>Black Ducks: Restore a three-year average wintering black duck population in the Chesapeake Bay watershed of 100,000 birds by 2025.</p>	<p>Recent mid-winter aerial surveys estimated the 2007-2009 and 2009 – 2011 rolling three year averages at 37,158 and 47,269 black ducks (respectively) in the Chesapeake Bay.</p>	<p>Revise outcome to reflect habitat carrying capacity of the watershed for black ducks. The energetics model is expected to be completed late FY14.</p> <p>Create 3 percent more forage on refuge lands every two years in order to restore a three-year average wintering black duck population in the Chesapeake Bay watershed of 100,000 birds by 2025.</p> <p>During 2014-2015, implement Eastern Neck and Martin NWR projects will directly benefit black duck, focusing on protecting existing habitat. (FWS)</p>	<p>In progress. Initial black duck forage estimates provided in November 2014.</p> <p>In progress. Projects implemented at Occoquan Bay and Elizabeth Hartwell Mason Neck National Wildlife Refuges.</p> <p>In progress. Design/build contracts awarded for two shoreline protection projects with Hurricane Sandy resiliency funding. On schedule for November 2016 completion.</p> <p>Partnered with The Conservation Fund to get a third Sandy resiliency project funded to enhance 30 acres of marsh at Blackwater NWR.</p>

<p>Land Conservation: Protect an additional 2 million acres of lands throughout the watershed currently identified as high conservation priorities at the federal, state or local level by 2025, including 695,000 acres of forest land of highest value for maintaining water quality.</p>	<p>7.8 million acres protected watershed-wide.</p>	<p>Protect an additional 2 million acres of land by 2025, an average of 133,333 acres annually. This includes total land protected by local, state and federal government, and nonprofit organizations.</p>	<p>As of the end of 2013, 8,371,682 acres of land has been permanently protected from development. This marks an achievement of 29 percent of the goal.</p>
<p>Public Access: Increase public access to the Bay and its tributaries by adding 300 new public access sites by 2025.</p>	<p>1,129 public access sites providing access to the Bay and its tributaries exist in the watershed.</p>	<p>Add 300 public access sites by 2025 by adding an average of 20 public access sites annually. This includes total sites added by local, state and federal government, and nonprofit organizations.</p>	<p>17 new public access sites were opened in 2014.</p>

2014 Programmatic Milestone Progress

Table D summarizes progress toward Programmatic Milestones

TABLE D. PROGRESS ON FY2014/2015 PROGRAMMATIC MILESTONES BY GOAL		
Target Date	Programmatic Milestone	2014 Progress
RESTORE CLEAN WATER		
TMDL/WIPs		
January 2014- February 2014	Evaluate and announce federal and jurisdictional 2014-2015 two-year milestones. (EPA)	Completed January 2014. (http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/EnsuringResults.html?tab2=3)
June 2014	Assess progress made to implement the 2012-2013 two-year milestones. (EPA)	Completed June 2014. (http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/EnsuringResults.html?tab2=3)
October 2014	Secure CBP Partnership approval of the Basinwide BMP Verification Framework. (EPA)	Approved by PSC September 2014. (www.chesapeakebay.net/bmpverification)
2014	Design, implement, and provide training for a scenario assessment tool that will be used by federal agencies and other stakeholders to plan BMPs to reduce pollutants from lands and facilities. (EPA)	Issued new BayFAST tool (BayFAST.org). Completed multiple training webinars in 2014.
2014	Deliver specified criteria to provide timely and collaborative decisions triggered by the Clean Water Act and the Fish and Wildlife Coordination Act. (USACE, USEPA, USFWS)	Ongoing. To be completed in 2015.
2014	Develop and implement permit streamlining measures under Clean Water Act Section 404 for restoration projects (USACE, USEPA, USFWS)	Ongoing. To be completed in 2015.
May 2015	Provide mid-term evaluation of 2014 milestones progress to jurisdictions. (EPA)	Ongoing. To be completed in 2015.
June 2015	Assess progress made to implement the 2014-2015 two-year milestones. (EPA)	Ongoing. To be completed in 2015.
December 2015	Secure CBP Partnership approval of the seven jurisdictions' enhanced BMP tracking, verification, and reporting programs. (EPA)	Completed and ongoing.
2014/2015	Continue to participate in and support Chesapeake Bay jurisdictions' MS4 regulation development in order to ensure installations are prepared to incorporate the permit requirements of the Chesapeake Bay TMDL. (DoD)	Ongoing. VA and PA installations completing pollution reduction plans for MS4 permits; Continuing to coordinate with MD on the development of their draft Phase II MS4 General Permit.
2014/2015	Continue to work with key partners to support watershed implementation plans, update installation land use information and improve available tools for installations to	Ongoing. DoD remains an active participant on land use workgroup. DoD is also a member of the newly formed Federal Target Setting Action Team.

TABLE D. PROGRESS ON FY2014/2015 PROGRAMMATIC MILESTONES BY GOAL		
Target Date	Programmatic Milestone	2014 Progress
	determine/plan for future load allocations and expected load reductions. (DoD)	
2015	Deliver the working draft Phase 6 Chesapeake Bay Watershed Model and accompanying Scenario Builder to the CBP Partnership evaluation, and refinement. (EPA)	Ongoing. To be completed in 2015.
2015	Deliver the working draft revised Chesapeake Bay Water Quality/Sediment Transport Model (incorporating the filter feeders and the enhanced shallow-water submodels) and Chesapeake Bay Atmospheric Deposition Model to the CBP Partnership evaluation, and refinement. (EPA)	Ongoing. To be completed in 2015.
2015	Deliver methods and tools for use by the CBP Partnership in evaluating and better understanding the effects of climate change on water-quality in the Chesapeake Bay ecosystem and surrounding watershed. (EPA)	Ongoing. To be completed in 2015.
AGRICULTURE		
2014	NRCS will continue to support voluntary actions by farmers and landowners to improve water quality by providing financial and technical assistance from the Environmental Quality Incentives Program (EQIP), Agricultural Management Assistance (AMA) Program, Wildlife Habitat Incentive Program (WHIP), Farm and Ranchland Protection Program (FRPP), Conservation Stewardship Program (CSP), and Conservation Technical Assistance (CTA) funds. (USDA)	Ongoing. WHIP and FRPP were repealed in the 2014 Farm Bill. New programs are Agriculture Conservation Easement Program (ACEP) and Resource Conservation Partnership Program (RCP). (USDA)
2014	Evaluate and assess the methodology/planning and implementation of the Chesapeake Bay Watershed Initiative contained in the Food, Conservation, and Energy Act of 2008 (110-246). This will include core and supporting conservation practices that address water quality resource concerns. The results will be published and could serve as a model for other multi state estuaries. Continue to pursue the development of regulatory predictability in Bay watershed states. (USDA)	Ongoing

TABLE D. PROGRESS ON FY2014/2015 PROGRAMMATIC MILESTONES BY GOAL		
Target Date	Programmatic Milestone	2014 Progress
2014	USDA will hire a post-doctorate professional who will use the CEAP APEX model to help inform the CBP partnership's BMP expert panels' work on estimating the nutrient and sediment reductions from agricultural conservation practices. (USDA)	Ongoing
2015	Pilot the Conservation Delivery Streamlining Initiative's Conservation Desktop for national use; integrate resource concerns, selected inventory and analysis tools, electronic signature, and geospatial information into conservation planning tools. (USDA)	Ongoing
2014/2015	Continue to pursue the development of agricultural certainty programs in Bay watershed states. (USDA)	Ongoing. Virginia program launched 2014. Delaware developed legislation. Maryland regulations drafted.
2014/2015	EPA will provide funding to support a consortium of land grant universities in running expert BMP panels to develop and/or update effectiveness estimates for agricultural practices. (EPA)	Completed
2014/2015	All Bay jurisdictions are facing similar challenges in initiating water quality trading programs. The Conservation Innovation Grants (CIG) Network is designed to facilitate interactions between the Chesapeake Bay states and other CIG awardees to help address these challenges and overcome obstacles collectively. (USDA)	Ongoing
2014	USDA and EPA will update the June 2011 Joint Workplan on Chesapeake Bay Conservation Data Collaboration based on progress made to date and USDA's December 2013 update to the Chesapeake Bay CEAP report. (USDA/EPA)	Ongoing. To be completed in 2015 work with the Chesapeake Bay Program Scientific Technical Advisory Committee (STAC).
December 2014 & December 2015	Conduct animal feeding operation (AFO) reviews in two jurisdictions. (EPA)	2014 review completed; reports to be issued in Spring 2015. 2015 review upcoming.
December 2014 & June 2015	Conduct six AFO/CAFO Program Assessments. (EPA)	Three assessments completed in 2014; reports to be issued in Spring 2015. Remaining three are underway and will be completed in 2015.
June 2015	Conduct two assessments of CAFO permits and associated Nutrient Management Plans. (EPA)	Ongoing

ATMOSPHERIC – RULES, DEPOSITION, ALLOCAITONS		
2014/2015	<p>Significantly reduce nitrogen deposition to the Bay and watershed by 2020. (EPA)</p> <ul style="list-style-type: none"> Update air deposition modeling for the Chesapeake Bay watershed incorporating the most recent finalized rules with significant NOx reductions. (EPA) Issue tier 3 Light-Duty Vehicle Emission and Fuel Standards final rule (criteria and toxics pollutants). (EPA) 	<p>Ongoing. Developments of updated Airshed Model scenarios that use the bidirectional NH4 simulation are underway. The new scenarios will be of 2011 (which includes implementation of the Tier 3 Fuel Rule), and 2025 the year when all CBP implementation for the Chesapeake TMDL is to be completed.</p> <p>Completed. Tier 3 Rule in place for nationwide implementation in 2017.</p>
2014	<p>Work with states to develop State Implementation Plan (SIP) revisions to reduce NOx emissions. (EPA)</p> <ul style="list-style-type: none"> Assist states in developing SIP revisions for nonattainment areas for 2014the 2008 ozone standard. (EPA) Work with states to designate nonattainment areas for the 2012 PM2.5 standard. (EPA) Oversee state implementation of Clean Air Act 129 rules (CISWI, SSI, HMIWI). Once fully implemented, these rules will reduce emissions of NOx, as well as air toxics. (EPA) 	<p>Ongoing. EPA Region III continues to work with Maryland on their development of an attainment SIP for the 2008 O3 standard.</p> <p>Completed. EPA designated 5 areas in PA as nonattainment for the 2012 PM2.5 NAAQS.</p> <p>Ongoing</p>

STORMWATER		
2014/2015	Develop joint workplans with jurisdictions to address stormwater assessment recommendations. (EPA)	Ongoing. Completed MD and VA workplans http://epa.gov/chesapeakebaytmdl Working with PA, DE and WV on developing their workplans.
2014/2015	Propose actions to strengthen the national stormwater program. (EPA)	Completed in November 2014.
2014/2015	Conduct oversight review and comment, per NPDES Memorandum of Agreement, on draft state MS4 permits: to ensure consistency with the Bay TMDL allocations and the level of pollution reduction called for in state WIPs; and to provide enforceable performance measures. (EPA)	Ongoing. Conducted permit reviews in MD, VA, PA, DE and WV.
2014/2015	Conduct review and comment on select TMDL implementation plans submitted by MS4 jurisdictions to ensure they have a schedule for implementing the necessary structural and non-structural controls and a final date to achieve the applicable WLAs. (EPA)	Ongoing
2014/2015	Develop and implement a Stormwater Best Management Practices Operation and Maintenance Policy to meet permit and water quality requirements. (DoD)	Ongoing
ONSITE (SEPTIC) SYSTEMS		
2014/2015	Outreach and technical assistance to Chesapeake Bay states on Model On-Site Program. Outreach and support via webinar(s) and/or conference call(s) to the states on topics related to the contents of the document. (EPA)	Completed
2014/2015	Outreach and technical assistance to Chesapeake Bay states on Model On-Site Program. Explore/research options for sharing data among states on evaluations of advanced onsite technologies. (EPA)	Completed
TRADING/OFFSETS		
2014	Issue final technical memoranda setting forth EPA expectations on jurisdictions' offset and trading programs. (EPA)	Ongoing. Six technical memoranda were issued in 2014. Four are scheduled to be issued in 2015. http://epa.gov/chesapeakebaytmdl/
2014	Work with other federal agencies to build capacity that will support an efficient and robust trading market. (USDA, EPA, DOT)	Ongoing

TOXIC CONTAMINANTS		
2014	Facilitate consideration by the Chesapeake Bay Program partnership of the toxic reduction and research outcomes developed in 2013 in the Bay Agreement. (EPA, FWS, USGS)	Completed. New toxic contaminant goal and outcomes included in 2014 Bay Agreement.
2014/2015	Develop strategies for addressing toxic contaminant reduction and research outcomes developed in 2013. (EPA, FWS, USGS)	Ongoing. Management strategies being developed by new toxic contaminant workgroup (formed in 2014).
December 2015	Conduct research on occurrence and effects of toxic contaminants on fish and wildlife with an emphasis on chemicals of emerging concern. (USGS, FWS).	Ongoing. USGS expanded studies in 2014 and new CBP partner research agenda being released in 2015.
OVERSIGHT AND ENFORCEMENT		
December 2014 and 2015	<p>Permit and Enforcement Oversight – Stormwater, Wastewater, Agriculture, Trading/Offsets, Air.</p> <p>NPDES Permit Reviews – Report annually on number of permits reviewed and objections. (EPA)</p> <p>Inspections and Case Development – Report annually on results and/or status. (EPA)</p>	<p>For FY14, within the Chesapeake Bay watershed, EPA reviewed permits for 58 significant wastewater facilities, five stormwater-related general permits, one statewide industrial permit, two construction general permits, 25 individual Concentrated Animal Feeding Operations (CAFO) permits and one general CAFO permit and objected to 14 draft wastewater permits.</p> <p>EPA continued to implement the Chesapeake Bay Enforcement Strategy that was developed in 2010. For FY14, EPA conducted 13 CAFO inspections, 20 Municipal Separate Storm Sewer System (MS4) inspections, 13 construction stormwater inspections and 12 industrial stormwater inspections. EPA completed 97 NPDES Administrative actions in the Chesapeake Bay Watershed in FY14. Under the Clean Air Act, EPA entered into one judicial settlement in the Chesapeake Bay Airshed that will result in nitrogen oxide emission reductions.</p>

MONITORING AND SCIENCE SUPPORT		
December 2014 and 2015	Provide annual updates of water-quality trends in tidal waters (EPA) and watershed (USGS) to assess progress toward nutrient/sediment reductions and water-quality standards. EPA will work with NOAA to utilize information from the Chesapeake Bay Interpretive Buoy System (CBIBS) data to enhance tidal results. (USGS, EPA)	Trend updates completed for 2013 and released (http://cbrim.er.usgs.gov/trendandyieldhighlights.html) Ongoing work between EPA and NOAA on using CBSIS.
December 2014	Develop strategy for Building and Sustaining Integrated Networks (BASIN) for estuary and watershed monitoring programs for the Bay TMDL and associated water-quality standards to 2025 (by Dec 2014). Work with CBP partnership to secure funding to implement strategy (by Dec 2015). (EPA with USGS and states/DC)	Ongoing. Draft report being prepared.
December 2015	Conduct project and distribute initial products to assess and explain water-quality changes in support of the Mid-Point Assessment (MPA) of the TMDL. (EPA, USGS, and academic partners working through the Scientific, Technical Assessment, and Report (STAR) team.)	Ongoing. "New insights" report released in 2014. (http://www.chesapeakebay.net/Groups/group/Water_Quality_Goal_Implementation_Team) and USGS presented results of upcoming report on water-quality conditions on the Eastern Shore.
EPA GRANT SUPPORT TO STATES AND THE DISTRICT OF COLUMBIA		
2014/2015	Provide financial support to jurisdictions by maintaining funding, as authorized, through EPA's assistance programs including CWA Section 319, SRF, CBIG and CBRAP. (EPA)	Completed for 2014. 2014 grant funds distributed to states (\$19 million for CBIG and CBRAP).
2014/2015	Provide financial support to localities and other entities through the Innovative Nutrient and Sediment Reduction (INSR) Grants and the Small Watershed Grants (SWG), as authorized. (EPA)	Completed in 2014 for INSR (\$5 million) and SWG (\$5 million). Also a new pot of local government funding of \$5 million was provided to state and local governments in 2014.

RECOVER HABITAT		
WETLANDS		
Feb/March 2014	<p>Convene Wetlands BMP Expert Panel to review current nutrient and sediment retention BMP efficiencies for Wetland Restoration/Creation BMP, develop BMP efficiencies for a new Wetland Enhancement/Rehabilitation BMP, and provide recommendations for wetland land-use classifications to the Land Use Workgroup for addition to Phase 6 of the TMDL model. (EPA, USGS, FWS)</p> <ul style="list-style-type: none"> • Explore crediting enhancement acreage (agribulture vs. urban) • Address reporting issues with wetland restoration acreage 	Completed. Panel convened November 2014; scope of work and membership approved.
2014-2015	<p>Work with The Nature Conservancy (TNC) and DE, MD, PA, and VA to implement the Multi-State Wetland Initiative funded through the Chesapeake Stewardship fund to target wetland projects that maximize wildlife habitat and water quality benefits while working to restore 160,000 wetland acres identified by Phase II Watershed Implementation Plans. (FWS, NRCS)</p>	Ongoing. Practitioner surveys to determine key impediments completed for all four states.
2014	<p>For Poplar Island, continue grading and development of wetland cells 3A and 3C and install tidal inlet structure for these cells to allow natural tidal flow into the wetlands a few months prior to the cells being planted. Begin design for wetland Cell 5 A/B, which will have a 4 acre vegetated habitat island constructed to provide additional valuable habitat for various bird species. (USACE)</p>	Ongoing. For Poplar Island, continue grading and development of wetland cells 3A and 3C and install tidal inlet structure for these cells to allow natural tidal flow into the wetlands a few months prior to the cells being planted. Begin design for wetland Cell 5 A/B, which will have a 4 acre vegetated habitat island constructed to provide additional valuable habitat for various bird species. The total number of wetland acres restored is 177 acres.
2015	<p>For Poplar Island, USACE will complete wetland planting efforts in Cell 3A which will bring the total amount of restored tidal marsh on Poplar Island to 243 acres. Grading in Cell 3C is scheduled to be completed during the summer of 2015 and the USACE will begin new grading efforts in Cell 5A/B which is 83 acres in size. (USACE)</p>	Ongoing. For Poplar Island, USACE will complete wetland planting efforts in Cell 3A which will bring the total amount of restored tidal marsh on Poplar Island to 232 acres. Grading in Cell 3C is scheduled to be completed during the summer of 2015 and the USACE will begin new grading efforts in Cell 5A/B. (USACE)
December 2015	<p>Complete design for 38 acres of tidal salt marsh within the Lynnhaven River Basin. (USACE)</p>	Ongoing. USACE advanced design for 38 acres of tidal salt marsh within the Lynnhaven River Basin. (USACE)

FISH PASSAGE		
2014	Revise methodology for calculating stream miles opened due to dam removal activities. (FWS)	Ongoing. Fish passage work group is currently revising methodology.
RIPARIAN BUFFERS		
2014	Convene Task Force of USDA, state, and other partners to recommend strategic actions to address increasing gap in achieving riparian forest buffer outcome. (USFS/NRCS/FSA)	Completed. State Task Forces have been convened and continue to meet. A regional steering committee has been meeting since March 2014.
2015	Convene a federal-state leadership summit to advance recommendations developed by the Task Force. (USFS/NRCS/FSA)	Completed. A Summit was convened in June 2014 by USDA and EPA.
STREAM RESTORATION		
Spring 2014	Host STAC Workshop on Designing Sustainable Stream Restoration Projects. (USGS, FWS, EPA)	Ongoing. The workshop was held and the report is in review.
2015	Consider options to expand the Stream Health indicator beyond the BIBI to include parameters such as flood plain connectivity and bank stability. (FWS)	Ongoing
2014	Deliver specified criteria to provide timely and collaborative decisions triggered by the Clean Water Act and the Fish and Wildlife Coordination Act. (USACE, USEPA, USFWS)	Ongoing. In 2014, USACE developed a checklist for NWP27.
2014	Develop and implement permit streamlining measures under Clean Water Act Section 404 for restoration projects. (USACE, USEPA, USFWS)	Ongoing. USACE developed a permit process flowchart in 2014 to provide more information to permit applicants.

ADDITIONAL MILESTONES		
2014	Support states and other partners in developing strategies to achieve urban tree canopy expansion goals and track on-the-ground progress. (USFS)	Ongoing. An Urban Tree Canopy Summit was held October 14-15, 2014 for states and partners to discuss management options.
2014-2015	Engage partners in carrying out collaborative actions set forth in the Chesapeake Forest Restoration Strategy, including development of online resources and webinars to promote forest restoration in priority areas. (USFS)	Ongoing. USFS and Bay Program partners are undertaking Strategy actions. Work on developing online resources has not started.
2014	Initiate Technical Synthesis III to research needs for SAV restoration success. (USGS, SERC, NOAA, EPA)	Ongoing. SAV Technical Synthesis III team of authors was convened. Detailed outline, authorship responsibilities assigned, and publication schedule agreed to.
2014	USACE will begin its Chesapeake Bay Comprehensive master Plan for restoring, preserving, and protecting the Chesapeake Bay ecosystem in coordination State and local governments, other Federal agencies, the Chesapeake Bay Program, the Chesapeake Bay Commission, and the Chesapeake Executive Council. This plan will identify additional feasibility and research efforts required to better understand and solve the environmental problems of the Chesapeake Bay. The first phase will be the reconnaissance study to determine federal interest in continuing the cost-shared feasibility studies and to identify willing non-federal cost sharing partners. (USACE)	Ongoing. Bay Comprehensive plan in coordination with the Bay states and interested groups and agencies. The reconnaissance study to determine federal interest in continuing the cost-shared feasibility studies and to identify willing non-federal cost sharing partners was completed in November 2014 and was favorable.
2014	Continue feasibility studies with Montgomery and Prince George's counties to analyze areas identified in the Anacostia Restoration Plan as being of potential interest for federal construction. The studies will address the issues of stream restoration, fish passage, wetland restoration and other habitat restoration. (USACE)	Ongoing. Feasibility studies begun with Montgomery and Prince George's counties. Studies have identified stream reaches for restoration and fish passage remediation. Draft reports to be released to the public in 2015.

SUSTAIN FISH AND WILDLIFE		
OYSTERS		
March 2015	Update the baseline oyster population estimate for the bay through completion of the oyster population assessment. (NOAA)	Completed. Provided to NOAA by Virginia Institute of Marine Science.
2015	Complete tributary restoration plans for Little Choptank and Tred Avon Rivers in Maryland and initiate tributary restoration planning process for the Lafayette river in Virginia. (NOAA)	Ongoing. Draft plans were completed, final restoration plan under review. In Progress on the Lafayette.
2015	Initiate coordinated studies of oyster reef ecosystem services on restored reefs, focusing on finfish utilization and nitrogen removal in Harris Creek, Tred Avon River, Great Wicomico River, Lafayette River, and Lynnhaven river, and share preliminary results in 2015. (NOAA)	Ongoing. NOAA is funding seven external research projects and one internal project.
2015	Complete a target of 377 acres of reef construction and seed planting in Harris Creek, the first tributary selected for large-scale restoration toward the oyster outcome. In addition, construct 24 acres in the Tred Avon.(USACE, NOAA) (The acreage target for Harris Creek was modified in 2015 to 372 acres from 377 mentioned above. The difference in 5 acres has been set aside as control sites for measuring fishery and nitrogen removal benefits of the restored reefs)	Ongoing. Restoration of Harris Creek will be completed in 2015. To date 258 acres toward the 372 acreage target are complete. The restoration plan can be found at http://www.chesapeakebay.noaa.gov/images/stories/habitats/harriscreekblueprint1.13.pdf .
2015	Finalize tributary restoration plans for Little Choptank and Tred Avon Rivers in MD and initiate tributary restoration planning process for the Lafayette River in VA. (NOAA,USACE)	Ongoing. NOAA provided habitat mapping for restoration areas in the Lynnhaven, Lafayette and Piankatank and co-leads the current tributary restoration planning process. Tributary restoration plans for Little Choptank and Tred Avon were completed and restoration began in Little Choptank.
2014/2015	Plan and construct 25 acres of sanctuary oyster reefs in the Piankatank River. Plan and construct 20 acres of sanctuary oyster reefs in the Lafayette River. (USACE, NOAA)	Ongoing. Elizabeth River Project and Chesapeake Bay Foundation are restoring reefs in the Lafayette with NOAA funding. In 2014, USACE constructed 20 acres of sanctuary oyster reefs occurred in the Piankatank River. The plan is to ultimately construct approximately 25-50 total acres of sanctuary oyster reefs in the Piankatank River.
2015	Construct 15 acres of sanctuary oyster reefs in the Great Wicomico River. (USACE)	Ongoing. To be completed in summer 2015.

BLUE CRAB		
2014/2015	Assess the extent to which the population is sustainable (i.e., between the abundance target of 215 million adult females and the minimum threshold of 70 million adult females) by preparing and delivering the Chesapeake Bay Blue Crab Advisory Report annually and convening the Sustainable Fisheries GIT to approve the report and adapt management approaches when necessary. (NOAA)	Ongoing. Populations are assessed annually and evaluated per the 215 million target.
BROOK TROUT		
2014	Compile deliverables of NFWF and NFHAP funded brook trout projects in the watershed in recent years, and use those to inform a realistic interim milestone for increased habitat occupancy. (FWS, USGS)	Ongoing. Brook Trout Action Team to recommend as part of management strategy.
2014	Work with FWS field office staff to develop a pilot prioritization of brook trout projects for MD in 2014; consider working with Downstream Strategies to expand their prioritization methodology to other states in the watershed. (FWS, USGS)	Completed. Model presented at RAE summit November 2014 and at STAR IAN seminar Dec. 2015. USGS started new projects on effects of land change and other species on brook trout populations.
2015	Integrate funding mechanisms of NFWF's Chesapeake Stewardship Fund, NFHAP, and EBTJV to align and optimize targeted investments in brook trout habitat restoration and protection in Chesapeake headwater streams. (FWS)	Ongoing. Brook Trout Action team to make recommendations based on pilot model outputs
BLACK DUCKS		
2014	The Black Duck Joint Venture (BDJV) and Atlantic Coast Joint Venture (ACJV) will continue to develop a decision support tool to identify priority parcels for securement (i.e., fee simple purchase or conservation easement) and restoration across black duck non-breeding range along the Atlantic Coast. (FWS, USGS)	Ongoing. Initial forage maps submitted by ACJV in November 2014; being analyzed by action team to determine target areas.
Fall/Winter 2014	Build the foraging energetics model by late FY14, (FWS, USGS) Complete collection of biomass sampling (Virginia Rivers Complex) and analysis of biomass samples. Complete foraging trials, determine food habits, and determine energetic costs associated with foraging and resting.	Ongoing. Models to support refuges under development by USGS.

CONSERVE LAND AND PUBLIC ACCESS		
LAND CONSERVATION		
2015	NatureServe will work with NPS, USGS, state agencies, and other partners to advance LandScope Chesapeake over the next year by expanding LandScope Chesapeake content watershed-wide, making targeted improvements to the LandScope Chesapeake mapping tools, and completing a redesign and re-architecture of the website's GIS platform. (NPS/USGS)	Ongoing. http://www.landscape.org/chesapeake/
2015	Continue to convene Large Landscape Conservation Partnership in order to advance conservation practices and innovations, and regional conservation priorities in the Chesapeake Bay watershed. (NPS)	Ongoing. Chesapeake Conservation Partnership was established; workgroups are underway. http://www.chesapeakeconservation.org/ 2014 annual meeting was held in October. Ongoing.
2015	Implement ongoing conservation programs (NPS, LWCF, REPI, NAWCA, etc.). (NPS/FWS)	Ongoing. The REPI Program continues to maintain active partnerships with several installations within the watershed FWS Chesapeake Bay Field Office, Rappahannock River Valley National Wildlife Refuge and Virginia Outdoors Foundation secured a National Coastal Wetland Conservation Grant in the Rappahannock watershed. FWS Chesapeake Bay Field Office also got two Coastal grants in the lower Potomac watershed and a NAWCA grant in the Pocomoke watershed, as well as approval to dedicate previously awarded but unused Coastal Grant funds to conservation priorities in the Nanticoke watershed. In total, 990 acres were protected with \$3,400,000 in grants funds, which leveraged an additional \$1,556,167 in matching funds.
2015	Identify culturally significant landscapes. NPS will continue coordinating research on Indigenous Cultural Landscape identification, mapping, and methodology through work in the Nanticoke River watershed in Maryland and along the Lower Susquehanna River in Pennsylvania and Maryland.(NPS) Identify culturally significant landscapes. NOAA will identify culturally significant landscapes for conservation, including maritime heritage resources. (NOAA)	Ongoing. Nanticoke ICL mapping work complete; Lower Susquehanna and Middle Potomac ICL projects in progress. Ongoing. NOAA supported nomination of Mallows Bay-Potomac River maritime landscape

2014	Identify ecologically significant landscapes for conservation. (FWS)	Ongoing. Building from a recently completed synthesis of State Wildlife Action Plans, FWS is leading development of a process among North Atlantic Landscape Conservation Cooperative (LCC) and Northeast state fish and wildlife agency partners to identify and delineate Regional Conservation Opportunity Areas, to be completed by June 2015. Several other conservation planning and design tools are under development by the Appalachian and North Atlantic LCC's.
2014	Complete final Chesapeake Working Lands Conservation Strategy. (USFS/NRCS)	Completed. Final Strategy posted at http://executiveorder.chesapeakebay.net/
2014	DoD will continue, through the Readiness and Environmental Protection Integration (REPI) Program, to identify opportunities to conserve priority landscapes around DoD installations in the Chesapeake Bay watershed. (DoD)	Ongoing. In Progress. Since the 2011 REPI Report to Congress, a total of 11,838 acres has been protected at these installations.
PUBLIC ACCESS		
2015	Continue collaborative implementation of public access plan via solicitation of new potential sites, work on priority actions such as universal accessibility and boat in camping along key trail segments, and tracking added access sites. (NPS)	Ongoing. The Public Access Team continues to track new sites as well as implement the strategies outlined in the Public Access Plan . A major effort was completed identifying 176 new needed potential access sites and displaying these sites in a GPS map viewer.

EXPAND CITIZEN STEWARDSHIP		
2015	Continue the work with youth partners towards increasing the number of youth stewards that supports and carryout conservation, restoration and access projects; while focusing on finding reliable funding streams for the Chesapeake Youth Corps and Intern Team. (NPS)	Ongoing. The Chesapeake Youth Corp (CYC) engaged, through numerous youth partnerships and programs, 3423 participants. Participants worked on restorations projects, creative enrichment activities, professional development activities and many civic engagement/stewardship opportunities. The CYC Network held 75 educational events, received nine grants in addition to matching funds and federal funds, and provided 1530 hours on mentoring to its participants.
2014	Develop baseline metrics to establish and measure outcomes related to student participation in teacher supported meaningful watershed educational experiences and related activities. (NOAA)	Ongoing. NOAA developed a survey instrument with the Chesapeake Bay Trust and an independent evaluator. The tool was piloted with school divisions and will be implemented for the 2014-2015 school year.
2015	Support the development and implementation of place-based programs that provide access and provide meaningful experiences through education and interpretation. (NOAA)	Completed/Ongoing. In FY14, NOAA B-WET program provided \$2.9 million in 32 grants to support place-based meaningful watershed experiences for thousands of students & teachers.
2015	Work with partners to conduct and immersive leadership development workshop for local government officials that include exposure to Chesapeake Bay issues. (NOAA)	Ongoing
2015	Work with partners to support a comprehensive strategy for Eastern Shore conservation that include strong community outreach. (NOAA)	Ongoing

ENVIRONMENTAL MARKETS		
2014/2015	Create a network among Bay watershed Conservation Innovation Grant awardees to help stimulate environmental markets. (USDA)	Completed. Network established in 2013 and continues to meet regularly.
2014	Host multi-agency training to support integration of mitigation banking, nutrient trading, and offsets in the Chesapeake Bay Watershed. (EMT / EPA, USDA, FWS, USACE)	Completed. Workshop held October 2014 in Beltsville, MD.
2014/2015	Support research, education, outreach, and policy development that promote credit trading and environmental market development in the Chesapeake Bay. (EMT)	The Chesapeake Bay Environmental Markets Team (EMT) sponsored a workshop to expand awareness of opportunities and promote coordination for a market-based approach to conservation in CB watershed. This workshop was held 29-30 Oct 2014. There were 60-75 attendees from federal and state agencies.
2014/2015	Enhance capacity to characterize economic implications of nutrient credit trading in the Chesapeake Bay Watershed. (EMT / USDA)	In support of the EMT, USDA entered into several cooperative agreements with universities and non-governmental organizations to provide technical analyses to inform environmental market development in the Chesapeake Bay. Specific documents released include: Reducing the complexity and administrative burden of operating trading programs in the Chesapeake Bay watershed (WRI) and an evaluation of how differences in state water quality credit trading tools and rules may impact water quality trading efforts in the Chesapeake Bay (WRI) In addition, projects analyzing public administration costs of nutrient trading programs in the Chesapeake Bay watershed (Virginia Tech), and on the economic implications of lags in pollution delivery on efficient agricultural waste load allocations and the design of water quality trading programs in the Chesapeake Bay (Pennsylvania State University) were completed. Publications are planned for 2015.

CLIMATE CHANGE		
2014-2015	Work with partners implementing projects through the Hurricane Sandy Coastal Recovery efforts to collaborate to achieve associated CBP goals to restore coastal wetlands, conserve lands, and address the potential effects of changing environmental conditions. (DOI, DOT and NOAA)	<p>Federal agencies collaborated on Hurricane Sandy restoration efforts to benefit the Chesapeake with several highlights listed below. NOAA has completed aerial surveys of changing shorelines in the lower Chesapeake Bay. DOT used federal funds for Hurricane Sandy disaster relief in part for competitively selected projects to help public transportation agencies become more resilient. Among selected projects were two projects to protect the existing Washington area subway system by raising ventilation shafts and installing drainage improvements. DOI implemented projects to improve both FWS refuges and NPS lands, with the USGS enhancing flood monitoring assets.</p> <p>NACCS, a study led by the USACE, assessed the impacts of the sea level and climate change on the North Atlantic coastal communities, including much of the Bay proper. The NACCS also produced an Environmental and Cultural Resources Conditions Report, dated October 2014, which is currently available on the study's webpage www.nad.usace.army.mil/compstudy. This report provides a summary, by state, of the existing conditions, habitat and resource impacts as a result of Hurricane Sandy, and the future conditions of those resources, considering sea level and climate change if no action is taken. The NAACS is scheduled completion in 2015.</p>
2015	Implement the Sentinel Site Network for assessing Sea-Level Rise. (NOAA)	Ongoing. With coordinated efforts by multiple agencies to support the new Climate Goal in the Bay Agreement. Highlights include NOAA and partners are collecting data to be used in modeling of ecological effects due to sea level rise. These models will inform natural resource managers and restoration efforts as well as municipal planners and managers. The CBSSC is currently selecting four human-built sentinel sites that will complement the 5 existing natural habitat oriented sites.

2014-2015	Improve the data and understanding of the potential effects of land and climate on the Bay and its watershed. (NOAA, USGS, USACE, EPA)	Ongoing. Under the NACCS, the USACE, has numerical modeling efforts which will provide information about future storms and climate change. EPA is working with USGS and partners on simulations of climate change impacts for the 2017 Midpoint Assessment. USGS released a report on rising stream temperatures in the Bay watershed is conducting analysis of climate change on stream flow.
STRENGTHEN SCIENCE		
2015	Work through STAR to assess monitoring needs associated with goals and outcomes in the New Bay Agreement (2014). (Federal agencies EPA, USGS, NOAA, FWS, working through STAR)	Ongoing. STAR will work with the Goal Teams to assess monitoring needs identified in management strategies and identify options to expand monitoring
2015	Enhance management and delivery of Chesapeake Bay information. (Federal agencies EPA, USGS, NOAA, FWS, working through STAR)	Ongoing. STAR formed the Data Integrity Workgroup to expand the CBP to ensure validity of data from expanded monitoring. EPA is working with agencies on what to manage and deliver data for the new Agreement.

IMPLEMENTATION AND ACCOUNTABILITY		
<i>Chesapeake Watershed Agreement</i>		
January 2014	Release draft Chesapeake Watershed Agreement for public review. (EPA)	Completed
June 2014	Chesapeake Watershed Agreement signed by the Executive Council. (EPA)	Completed. Signed in June 2014. (http://www.chesapeakebay.net/chesapeakebaywatershedagreement/page)
June 2015	Management Strategies completed for all outcomes in the Chesapeake Watershed Agreement. (EPA)	Ongoing. Management Strategies are due June 2015. Drafts will be available for public input March 2015.
2014	Negotiate changes to Chesapeake Bay Program governance document with the partnership, including needed changes to the structure, the decision-making process, and the membership. (EPA)	Completed. Issued July 2014. (http://www.chesapeakebay.net/Channel_files/22179/cbp_governance_document_7-16-14.pdf)
<i>ChesapeakeStat</i>		
2014	Phase I: Redesign ChesapeakeStat website to track progress toward meeting the goals and outcomes of the new Agreement and implementation of management strategies. (EPA)	Ongoing. Umbrella site for ChesapeakeStat expected to be completed January 2015. Progress site expected to be completed by the EC meeting in summer 2015.
2015	Phase II: Complete a discovery process for expanding and enhancing ChesapeakeStat to support collaborative decision-making between Chesapeake Bay Program Goal Implementation Teams and workgroups. (EPA)	Ongoing. Scheduled for December 2015 completion.
<i>Annual Action Plan and Progress Report</i>		
2014	Include Federal Milestones for all goals and outcomes for 2014-2015 in the Annual Action Plan and Progress Report. (EPA)	Completed March 2014.
2014	Develop 2014 Annual Progress Report for this Executive Order. Include interim progress on meeting the 2014-2015 Federal Milestones. (EPA)	Ongoing. 2014 Progress report to be completed in March 2015. 2015 Actions to be integrated into new Bay Agreement Management Strategies in June 2015.