



CHESAPEAKE BAY FOUNDATION
Saving a National Treasure

WRITTEN TESTIMONY OF
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Chairman Huffman, Ranking Member Bentz, and Members of the Subcommittee, thank you for inviting me to testify today on behalf of the Chesapeake Bay Foundation (CBF) and its over 300,000 members in support of H.R. 3540 – Chesapeake Bay Science, Education, and Ecosystem Enhancement Act (SEEE Act) and H.R. 4092 – Coastal Habitat Conservation Act.

For more than half a century, CBF has led a landmark effort to save the Chesapeake Bay¹—a national treasure on which the health and wellbeing of nearly 18 million people² and 3,600 species of plants and animals depend.³ The watershed spans 64,000 square miles from Cooperstown, New York to Virginia Beach, Virginia and westward to the Allegheny Mountains. In total, it encompasses six states— Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia— and the District of Columbia.⁴ There are 11,684 miles of shoreline which is more than the entire U.S. west coast and includes 160 major rivers and streams in the watershed.⁵ It is our nation’s largest estuary and the third largest estuary in the world.⁶

The Bay is a vital economic engine for the region and for the nation. According to NOAA’s latest report, in 2018 the commercial seafood industry in Maryland and

¹ See Attachment A titled “Chesapeake Bay Restoration Efforts”.

² <https://www.chesapeakebay.net/discover/watershed>.

³ The flora and fauna in the watershed including in this number are 348 species of finfish, 173 species of shellfish, over 2,700 plant species and more than 16 species of underwater grasses. Additionally, the 87 species of waterbirds rely on the Bay. Environmental Protection Agency (EPA) Chesapeake Bay Program (CBP), Facts and Figures, <https://www.chesapeakebay.net/discover/facts>.

⁴ EPA CBP, Watershed, <https://www.chesapeakebay.net/discover/watershed>.

⁵ Id.; EPA CBP, Facts and Figures, *supra* note 3.

⁶ EPA CBP, Watershed, *supra* note 4.

Virginia brought \$5.8 billion in sales, \$1.4 billion in income, and nearly 40,000 jobs to the region.⁷ Recreational fishing in Maryland and Virginia supported over 14,000 jobs and generated approximately \$1.6 billion in sales \$610.3 million in income.⁸

Thanks to partnerships with governments on all levels, non-profit organizations, and businesses across the watershed, we have made great strides to save the Bay. But our progress continues to be threatened by weakened regulatory programs, lack of sufficient funding at the federal and state levels, polluted runoff, air pollution, chemical contamination, habitat loss, and climate change. Thus, as explained in detail below, the reauthorization of the National Oceanic and Atmospheric Administration's Chesapeake Bay Office (NCBO) and bolstering the work of the Fish and Wildlife Service's (FWS) Coastal Program, which focuses on landscape-level planning and on-the-ground restoration projects to protect our coastal areas, could not come at a more critical time for the watershed.

H.R. 3540- Chesapeake Bay Science, Education, and Ecosystem Enhancement Act (SEEE Act)

The SEEE Act would re-authorize the NBCO and strengthen the Office's ability to use science to help restore the Bay and support the watershed's oyster, blue crab, striped bass, and other ecologically and economically valuable fisheries. Through research programs, technical assistance, coordination, long-term monitoring, and habitat restoration, NCBO provides important insights for improving the Bay's ecosystem and supporting coastal communities. Through its leadership role in the EPA Bay Program's Goal Implementation Teams, the NCBO is responsible for the stewardship of our fisheries and coastal habitats and ensuring the estuary and the species that depend on it have a healthy future for many years to come.⁹

The SEEE Act would also authorize the Bay Watershed Education and Training (B-WET) program which offers students and teachers the opportunity to learn about the scientific value and wonder of the Bay ecosystem firsthand.

⁷ National Marine Fisheries Service. 2021. Fisheries Economics of the United States, 2018. U.S. Dept. of Commerce, NOAA Tech. Memo. NMFS-F/SPO-225, 246 p. 112, available at https://media.fisheries.noaa.gov/2021-11/FEUS-2018-final-508_0.pdf.

⁸ *Id.* at 113.

⁹ See, e.g., EPA CBP, Maintain Healthy Watersheds Goal Implementation Team, https://www.chesapeakebay.net/who/group/maintaining_healthy_watersheds_goal_implementation_team.

- **Large-scale Oyster Restoration**

Oyster reefs provide many ecosystem benefits—the oysters that inhabit them are natural filter feeders that help clean and filter the water. As oysters grow, they create three-dimensional reef structures which provide habitat for hundreds of aquatic species—anemones, sponges, crabs, and fish, to name a few. Oyster reefs are considered a keystone habitat for important fish species like black sea bass, red drum, summer flounder, and spotted sea trout. Many recreational fishers value these reef habitats for the abundance and diversity of fish communities they support.

As a result of decades of overharvesting, pollution, and disease, the Bay’s native oyster population is a fraction of historic levels. Large-scale restoration projects are the best chance for reversing the population decline and safeguarding the vital services oysters provide. These projects create refuges for adult oysters that reproduce and seed additional reef areas in the Bay. They also build functioning reef systems that work collectively to improve the Bay’s water quality and biodiversity.

The NCBO is one of the key agencies implementing large-scale oyster restoration in the Chesapeake Bay. NCBO scientists developed the restoration blueprints that are now guiding the construction of oyster reefs in ten rivers in Maryland and Virginia in support of the Chesapeake Bay Watershed Agreement goals.¹⁰ These scientists conduct habitat assessments to understand baseline conditions before and after oyster restoration projects, providing critical knowledge to resource managers who work to ensure long-term success of these restoration efforts. The data and information the NCBO collects helps other resource managers across the globe shape their own restoration projects based on lessons learned here in the Bay.

According to NOAA’s latest statistics, in 2020, 85 acres of oyster reefs were restored and around 164 juvenile oysters planted in Maryland and Virginia.¹¹ Overall, 1,095 acres have been restored and 5 billion juvenile oysters planted across Maryland and Virginia due to NCBO and its partners, making this the largest oyster restoration effort in the world.¹² NOAA equates these numbers with “828 football fields of healthy habitat, natural water filtration, and enhanced fishing

¹⁰ CBF, Large-Scale Oyster Restoration, <https://www.cbf.org/how-we-save-the-bay/chesapeake-clean-water-blueprint/2014-chesapeake-watershed-agreement/large-scale-oyster.html>.

¹¹ NOAA, Significant Progress for Chesapeake Bay Oyster Reef Restoration – Yes, Even in 2020, <https://www.fisheries.noaa.gov/feature-story/significant-progress-chesapeake-bay-oyster-reef-restoration-yes-even-2020>.

¹² *Id.*

opportunities for people.”¹³ Additionally, NOAA has released 10 restoration blueprints which lay out its goal to restore oysters in 10 Chesapeake tributaries by 2025.¹⁴

Monitoring indicates that these restoration projects are showing great promise, with the vast majority of reefs meeting the success criteria to be considered fully restored. An NCBO-led comprehensive research program indicates that restoration is also paying dividends to the Chesapeake Bay ecosystem. Studies have shown that restored reefs are removing seven times as much nitrogen from the water each day than unrestored areas, reducing excess nutrients that fuel low-oxygen ‘dead zones.’ Productivity of important prey species for fish, including worms, grass shrimp, mud crabs, and others, can exceed 5,000 individuals per square meter, and survival of juvenile blue crabs is three times higher on reefs than in unrestored areas. These ecosystem benefits have tangible advantages for coastal communities as well. Once mature, oyster reefs in the Choptank River system in Maryland are expected to increase fishery landings and revenue by \$23 million annually and support an additional 300 jobs in coastal counties that are heavily dependent on the seafood industry.

Since 2017, CBF has partnered with NCBO to host the Rod and Reef Slam Fishing Tournament, an event focused on the enhanced recreational fishing opportunities that restored oyster reefs provide. Instead of awarding prizes for the largest or heaviest fish, this tournament awards the grand prize to the angler who catches the highest diversity of fish species while fishing over restored oyster reefs. In 2021, twenty-seven different species were caught, and 122 catches logged. This event provides important data to scientists and managers as well as giving anglers a hands-on experience of the productivity and biodiversity on oyster reefs.

Without NCBO’s technical expertise, coordination, monitoring, and support, projects of this scale, complexity, and level of success would simply not be possible. The SEEE Act supports and allows the NCBO to expand its restoration efforts.

- **Environmental Education**

As the federal lead for K-12 education in the Chesapeake Bay Program partnership, the NCBO provides the tools, resources, and funding necessary to ensure the next

¹³ *Id.*

¹⁴ Chesapeake Progress, Oysters, <https://www.chesapeakeprogress.com/abundant-life/oysters> (the ten tributaries are Harris Creek, the Little Choptank, Tred Avon, upper St. Mary’s and Manokin rivers in Maryland, and the Great Wicomico, Lafayette, Lower York, Lynnhaven and Piankatank rivers in Virginia).

generation of Bay stewards have a comprehensive understanding of our complex watershed.

Throughout the watershed, students, teachers, and experts team up year-round to learn about the Chesapeake's diverse habitats through hands-on learning. Students engage in defining local issues, participating in field investigations, learning to synthesize information and draw conclusions, and participating in action-oriented projects. This learning, known as Meaningful Watershed Educational Experiences (MWEE)¹⁵, is a cornerstone of environmental education, and enables student learning in the context of life-relevant, real-world problems.

NCBO implements the Chesapeake Bay Watershed Education and Training (BWET) program, which delivers grant funding across the watershed for dozens of environmental literacy programs, educating tens of thousands of students, and providing professional development for hundreds of teachers. BWET helps equip educators with the skills, knowledge, and confidence to effectively teach students about the watershed, ensuring the next generation of bay stewards are environmentally literate. For instance, NOAA has provided resources to support teacher training in Pennsylvania's Susquehanna River basin on how to incorporate MWEEs into district-wide curriculum. This helps ensure long-term, comprehensive environmental education is integrated across school districts.

Additionally, NCBO helps states across the watershed organize. It connects state departments of education with their natural resource agencies, focusing on key opportunities to benefit students and share innovative ideas (such as MWEEs) between states.

NCBO also runs the Environmental Science and Training Center, providing educators the knowledge and tools they need to deliver up-to-date science information to the next generation. Through workshops at both the Oxford, Maryland center, and throughout the watershed with partner organizations, teachers learn how to apply science with students in the classroom and in the field.

Since its inception two decades ago, Chesapeake B-WET has evolved from funding projects in individual schools to supporting school districts and state-wide environmental literacy efforts. It has directly reached more than 700,000 students and 25,000 teachers in the Chesapeake Bay watershed with high-quality Meaningful Watershed Educational Experiences. Over the past 20 years, NOAA has

¹⁵ NOAA, Bay Watershed Education and Training, <https://www.noaa.gov/office-education/bwet>; see also CBF, Meaningful Watershed Educational Experiences, <https://www.cbf.org/join-us/education-program/mwee/>.

awarded more than \$110 million to 874 B-WET projects¹⁶ with \$46 million to support 253 B-WET projects in the Chesapeake Bay Watershed.

The SEEE Act would authorize the B-WET program, providing more students with the opportunity to learn first-hand about the importance of protecting and restoring the Chesapeake Bay watershed.

- **Ocean Monitoring and Climate Change**

Across the Chesapeake Bay, NCBO manages a vast ocean observing network, including observation buoys that track meteorological and oceanographic conditions, telemetry arrays that monitor fish movement, and water quality sensors that monitor ecosystem conditions. For example, the Chesapeake Bay Interpretive Buoy System (CBIBS)¹⁷ provides weather and environmental information such as wind speed, temperature, and wave height, updated every six minutes. The data provided by CBIBS is available online, via mobile app, or by phone call, allowing boaters and anglers to access real-time data to plan their trips and be safe on the water. Data from the buoys are combined with satellite data to track harmful algal blooms, monitor sediment plumes, measure oxygen levels important to fish throughout the year, and forecast the distribution and severity of dangerous bacteria – information critical to oyster aquaculture operations.

Additionally, NCBO is on the front lines of advancing our understanding of how climate change will impact the Chesapeake Bay, particularly fish species and the habitats they depend on. NCBO has brought together experts from across the watershed and beyond to understand how rising water temperatures, low oxygen 'dead zones', and habitat availability will change over time, and the impacts that will have on commercial and recreational fisheries. Ongoing work will quantify the availability of habitat for species like striped bass, summer flounder, and black sea bass. Researchers are also working to identify the environmental drivers that determine the productivity of forage fish species like Atlantic menhaden, which serve as primary prey for the Bay's top predators. These insights are critical to understanding the challenges that climate change presents for the Bay and for managing the fisheries that are so important to the region.

The ability to address the complex challenges of climate change impacts on our watershed demands scientific expertise and adequate funding. As the federal lead for the climate resiliency goal team, the NCBO is equipped to continue leading climate resilience and adaptation work in the watershed. However, to stand up to

¹⁶ NOAA, Bay Watershed Education and Training, *supra* note 15.

¹⁷ NOAA, Chesapeake Bay Interpretive Buoy System, <https://buoybay.noaa.gov/>.

the challenges climate change poses and position the next generation of Bay stewards for success, deeper investments must be made in this vital work. The SEEE Act expands NCBO ocean monitoring efforts, which will provide the necessary data to implement science-based decision making across the watershed.

- **Funding for NCBO**

The SEEE Act would provide necessary financial stability to the NCBO for Fiscal Year (FY) 2022 through FY2025. To ramp up any of the priority areas and to follow through on its Strategic Plan¹⁸, the NCBO needs reassurances it will have consistent funding. As highlighted above, and one example of how sustained funding is necessary to meet NCBO's goals, the ten oyster restoration projects that NCBO is working on will require additional monitoring and evaluation past 2025 in three-to-six-year intervals.¹⁹ In order to ensure that these long-term restoration projects are completed and the agency has the ability to collect the necessary data to determine the water-quality benefits, reassurances that funding will be available is needed. Additionally, efficiencies can be derived from sustained funding for monitoring and restoration by reducing uncertainty and associated mobilization costs, making federal investments more cost-effective over time.

Restoring the Chesapeake Bay has always been a bipartisan effort. At this critical time for the Bay cleanup effort, we encourage this committee to promote its swift passage to ensure that NCBO continues to play a vital role in restoring the health of the Bay – its waterways, fisheries, and wildlife habitats – and meeting the 2025 restoration requirements and the commitments of the Chesapeake Bay Agreement.

H.R. 4092 – Coastal Habitat Conservation Act

The Fish and Wildlife Service's (FWS) Coastal Program was established in 1985 as the "Bay/Estuary Program".²⁰ Its purpose was to help address the increase in development and pollution in the Chesapeake Bay watershed by using a "landscape-scale conservation" method to restore and protect coastal habitat in the Bay.²¹ Due to its success early on in developing partnerships across the Bay

¹⁸ NCBO 2020-2025 Strategic Plan, https://repository.library.noaa.gov/view/noaa/28762/noaa_28762_DS1.pdf; see also NCBO Biennial Report to Congress Fiscal Years 2019 and 2020, <https://media.fisheries.noaa.gov/2021-04/NCBO%2019-20%20Biennial%20Report%20to%20Congress%20FINAL.pdf?null>.

¹⁹ Chesapeake Progress, Oysters, *supra* note 14 ("Monitoring and evaluation will take place at three- and six-year intervals following construction and seeding. This monitoring and evaluation phase will not be complete until after 2025.").

²⁰ FWS Coastal Program Strategic Plan, [https://www.fws.gov/coastal/pdfs/Coastal-Program-Vision-\(508-compliant\).pdf](https://www.fws.gov/coastal/pdfs/Coastal-Program-Vision-(508-compliant).pdf).

²¹ *Id.*

watershed, in 1991 the program expanded and became the FWS Coastal Program in order to replicate these partnerships in other estuaries.²² Today, the program works with coastal communities in 24 states to conserve and restore coastal ecosystems.²³

With coastal watersheds providing over 60 million jobs to the American people and habitat for 45% of federally-listed threatened and endangered species,²⁴ FWS Coastal Program's work to protect coastal ecosystems is instrumental. Through voluntary partnerships, FWS Coastal Program helps provide technical and financial assistance to private landowners (including agricultural producers), Tribes, state and local governments, non-profit organizations, and others secure funds for conservation programs that work to "restore, enhance, and protect habitat for priority Federal trust species."²⁵

Our coastlines are important from both an economic and environment perspective. As reported by FWS, the benefits of coastal watersheds include:

- Coastal habitats generate \$23.2 billion in storm protection services per year by mitigating the impacts of hurricanes, over \$43.6 billion in recreational fishing and migratory bird hunting, and \$44 billion in travel.
- Coastal habitats support 80% of waterfowl and other migratory birds, over 75% of the commercial harvest of fish and shellfish, and over 90% of the nation's recreational harvest of fish and shellfish.²⁶

Since 1985, the FWS Coastal Program has worked with over 6,400 partners to protect over 2.1 million acres of habitat, restore over 550,000 acres of habitat and 2,600 miles of streams, and help delist or downlist 20 federally-listed threatened or endangered species.²⁷ In part, it has done this by delivering over \$1.6 billion in partner contributions, leveraging \$8 partner funds to \$1 FWS Coastal Program funds.²⁸ Thus, the FWS Coastal Program is instrumental in providing funding and technical assistance for our coastal communities.

²² *Id.*

²³ Department of Interior, Budget Justification and Performance Information Fiscal Year 2022 for the FWS, <https://www.doi.gov/sites/doi.gov/files/fy2022-fws-budget-justification.pdf> (at EX-6).

²⁴ FWS Coastal Program, Coastal Program Brochure, <https://estuaries.org/wp-content/uploads/2018/09/Coastal-Program-Brochure-Online-Version-508-compliant-1.pdf>.

²⁵ Department of Interior, Budget Justification and Performance Information Fiscal Year 2022 for the FWS, *supra* note 23, at EX-9; 16 U.S.C. §3772(1) ("The term 'Federal trust species' means migratory birds, threatened species, endangered species, interjurisdictional fish, marine mammals, and other species of concern.").

²⁶ FWS Coastal Program, Coastal Program Brochure, *supra* note 24.

²⁷ *Id.*

²⁸ *Id.*

- **Benefits to the Chesapeake Bay Watershed**

An important hallmark of the FWS Coastal Program is their success in working with private landowners to conserve and restore critical coastal habitats. A shining example of that is the Delmarva fox squirrel, a subspecies of fox squirrel that once ranged from southern New Jersey down to Virginia. However, after years of habitat loss and population declines due to timber harvesting and land development,²⁹ in 1967, the Delmarva fox squirrel was listed as endangered after dropping to less than 10% of their historical abundance. More than 80% of the Delmarva fox squirrel's habitat occurs on private lands, which can make habitat restoration difficult for landowners without the technical assistance and guidance of scientists and managers like those at FWS Coastal Program.

In 2012, in cooperation with private landowners and the Maryland Department of Natural Resources, the FWS Coastal Program worked to bring back the Delmarva fox squirrel by converting 442 acres of salt marsh, wetlands, forests and farmland to permanent conservation easements, saving them from the threat of development. The Coastal Program also worked with the landowners to bring back Atlantic white cedar wetland habitat, restoring more than 28% of the fox squirrel's original home range and allowing it to be removed from the federal endangered species list in 2015.³⁰

While the FWS Coastal Program is focused on protecting and restoring coastal habitats for the benefit of trust species, these actions also contribute to improving the health and climate resiliency of the Chesapeake Bay by improving water quality, reducing runoff, and stabilizing our shorelines. For instance, at the U.S. Naval Academy Dairy Farm in Gambrills, Maryland, CBF partnered with FWS Coastal Program, Maryland Department of Natural Resources and Anne Arundel County to carry out stream restoration projects on Towser's Branch and Jabez Branch. Jabez Branch is the last known stream in Maryland's Coastal Plan to hold eastern brook trout. Stream restoration projects at Navy Dairy Farm repaired unstable stream banks that had been affected by row crop production and livestock grazing, providing habitat for hawks, salamanders, frogs, eels, and other important species as well as reducing nutrients and sediment in these headwater streams that lead to Chesapeake Bay.³¹

²⁹ EPA CBP, Delmarva Fox Squirrel,

https://www.chesapeakebay.net/S=0/fieldguide/critter/delmarva_fox_squirrel.

³⁰ Restore America's Estuaries, Saving a Rodent of Unusual Size, <https://estuaries.org/saving-a-rodent-of-unusual-size/>.

³¹ FWS, Navy Dairy Farm Tributary Stream Restoration Gambrills, Anne Arundel County, Maryland Project Summary and Design Report Methodology, CBFO-S16-01 (Feb. 2016), available at https://www.fws.gov/ChesapeakeBay/PDF/stream-restoration/NDF_DesignReport_FINAL_3-1-16_w_appendix.pdf.

- **Funding for the FWS Coastal Program**

The bill provides a steady increase in funding to the program starting at \$20 million in FY2022 to \$25 million in FY2026. The program in FY2021 was funded at \$13.6 million.³² However, as coastal communities continue to battle climate change, increased land degradation and pollution, it is imperative that the technical and financial assistance that the FWS Coastal Program provides be enhanced. FWS estimates that:

coastal watersheds and estuaries ... support 45 percent of threatened and endangered species, 85 percent of waterfowl, and 68 percent of commercial fish. They are home to 40 percent of the U.S. population and produce 50 percent of the Nation's economic output, resulting in intense development pressure. In addition to providing valuable fish and wildlife habitat, coastal ecosystems supply clean drinking water, attenuate floods, and provide recreational opportunities to coastal communities.³³

Additionally, FWS estimates that “the average Coastal Program project directly supports 12 jobs and eight businesses.”³⁴

In the FY2022 President Budget Request, the President asked for an additional \$2 million, which would increase the program's budget to \$15.6 million, for this program stating that the additional funds would help the FWS “protect and restore an additional 1,399 acres of wetlands and 1,141 acres of uplands, four riparian miles, and three fish passage structures in coastal watersheds.”³⁵ The added economic and environmental benefit received from the increased funding provided for the FWS Coastal Program in the Coastal Habitat Conservation Act clearly justifies the increase in addition to the financial security provided to the program, as was discussed above for the SEEE Act.

Chairman Huffman, Ranking Member Bentz, and Members of the Subcommittee, thank you again for the opportunity to testify in support of these bills.

³² Department of Interior, Budget Justification and Performance Information Fiscal Year 2022 for the FWS, *supra* note 23, at EX-9.

³³ *Id.* at HC-5; see also Rouleau, T., Colgan, C.S., Adkins, J., Castelletto, A., Dirlam, P., Lyons, S., and Stevens, H. 2021. The Economic Value of America's Estuaries: 2021 Update. Washington: Restore America's Estuaries, available at <http://www.estuaries.org/economics/2021-report>.

³⁴ Department of Interior, Budget Justification and Performance Information Fiscal Year 2022 for the FWS, *supra* note 23.

³⁵ *Id.* at HC-6 (this equates the Coastal Program restoring or protecting approximately “28 miles of stream/shoreline, 7147 wetlands acres, 10310 upland acres, and improve eight fish passage barriers.”).

Attachment A

The Chesapeake Bay Restoration Effort

The restoration effort began in 1976 when Congress directed the U.S. Environmental Protection Agency (EPA) to undertake a comprehensive study of the Bay focused on its water quality and living resources. Six years later, the EPA report identified nutrient pollution as the greatest threat to the Bay and recognized that the problem would need to be addressed by all of the watershed states, not just Maryland and Virginia. The report provided an innovative intergovernmental and inter-jurisdictional solution. The EPA “Chesapeake Bay Program” was formed that December—with the governors of Maryland, Pennsylvania and Virginia, the Mayor of the District of Columbia, the Administrator of the EPA and the Chair of the Chesapeake Bay Commission signing the Chesapeake Bay Agreement of 1983.

In February 1987, Congress passed the reauthorization of the Water Quality Act of 1987 (Clean Water Act), which included a provision, known as Section 117, that codified the Chesapeake Bay Program and authorized Congress to continue funding the important restoration effort at \$13 million annually.³⁶

This led to the 1987 Chesapeake Bay Agreement, which for the first time included specific quantitative goals and commitments; the centerpiece of which was to reduce nutrient pollution to the Bay by 40% by 2000.³⁷ When the Chesapeake Bay partners missed their 40% nutrient reduction goal, the state governors, the mayor of the District of Columbia, EPA and the Chesapeake Bay Commission signed the Chesapeake 2000 agreement, which included more than a hundred ambitious commitments, including a re-affirmation of the 40% nutrient reduction goal, a commitment to reduce sediment and nutrient loads sufficient to remove the Bay and its tidal rivers from the impaired waters list, and a goal to increase the oyster population by ten-fold from the 1994 baseline, all by a 2010 deadline.³⁸ Also, in 2000, both Delaware and New York signed a Memorandum of Understanding with the

³⁶ In 2000, Congress passed a reauthorization of Section 117 of the Clean Water Act, which did not substantially alter the approach or make up of the Chesapeake Bay Program but did increase the authorization level to \$40 million annually. For the last several years, funding for the Bay Program has been around \$73 million annually.

³⁷ 1987 Chesapeake Bay Agreement,
https://www.chesapeakebay.net/content/publications/cbp_12510.pdf.

³⁸ Chesapeake 2000 Agreement,
https://www.chesapeakebay.net/what/publications/chesapeake_2000_agreement.

other Chesapeake Bay Program partners and agreed to adopt the Water Quality goals of the Chesapeake 2000 agreement.³⁹ West Virginia followed suit in 2002.⁴⁰

When the Chesapeake Bay Program failed to meet its water quality goals again in 2007, CBF, along with several signatories to the Chesapeake Bay Agreements, and local partners sued the EPA for failure to comply with the Clean Water Act and the terms of the Chesapeake Bay Agreements.⁴¹ A settlement was finalized in May 2010 which explicitly incorporated the total maximum daily load (TMDL) process, providing a legally binding, enforceable commitment that EPA would take specific actions to ensure that pollution to rivers, streams, and the Chesapeake Bay is reduced sufficiently to remove the Bay from the federal "impaired waters" list.⁴²

NOAA and other agencies' roles in the restoration of Chesapeake Bay and its living resources was reiterated by the issuance of Executive Order 13508 by President Barack Obama on May 12, 2009.⁴³ The Executive Order on Chesapeake Bay Protection and Restoration acknowledged the economic, social, and cultural value of the Chesapeake Bay to the nation as a whole and created a Federal Leadership Committee including EPA, NOAA, U.S. Fish and Wildlife Service and others, charged with developing priority strategies to restore the health and natural resources of the Chesapeake Bay. It was through this committee that the concept of large-scale oyster restoration was born, with a recommendation that state and federal partners should restore oysters in twenty Chesapeake Bay tributaries by 2025.

In December 2010, the EPA and the Bay jurisdictions finalized the Chesapeake Bay TMDL, which sets science-based, enforceable limits on nitrogen, phosphorus and sediment pollution necessary to meet water quality standards.⁴⁴ It also formed jurisdiction-specific plans to achieve those pollution limits—together known as the Chesapeake Clean Water Blueprint. EPA and the Bay jurisdictions agreed to implement 60 percent of their Bay cleanup practices by 2017 and 100 percent by

³⁹ Memorandum of Understanding among the State of Delaware, the District of Columbia, the State of Maryland, the State of New York, the Commonwealth of Pennsylvania, the Commonwealth of Virginia, the State of West Virginia, and the United States of EPA (Oct. 1, 2000), available at https://www.chesapeakebay.net/what/publications/memorandum_of_understanding_among_the_state_of_delaware_the_district_of_col.

⁴⁰ Memorandum of Understanding regarding cooperative efforts for the protection of the Chesapeake Bay and its Rivers (Oct. 31, 2002), available at https://www.chesapeakebay.net/what/publications/memorandum_of_understanding_regarding_cooperative_efforts_for_the_protectio.

⁴¹ *Fowler v. EPA*, No. 1:09-C-00005-CKK, 2009 U.S. Dist. LEXIS 132084 (D.D.C. 2009).

⁴² *Id.*

⁴³ Exec. Order No. 13508, 75 Fed. Reg. 23,099 (May 15, 2009).

⁴⁴ The "Chesapeake Bay TMDL" applies to 92 impaired segments. See EPA, Chesapeake Bay Total Maximum Daily Load, <http://www.epa.gov/chesapeakebaytmdl/>.

2025. To develop these plans, Bay jurisdictions worked with local governments to take advantage of their knowledge about sources so that the pollution reduction requirements were equitably distributed, and one sector was not burdened at the expense of another.

In June of 2014, representatives from the entire watershed signed the Chesapeake Bay Watershed Agreement.⁴⁵ For the first time, Delaware, New York, and West Virginia committed to full partnership in the Bay Program. The agreement includes the Chesapeake Clean Water Blueprint goals for 2017 and 2025, but also established additional conservation goals, such as goals for habitat restoration and conservation, improving fisheries, increasing public access public access, and environmental literacy. This Agreement included a commitment to large-scale oyster restoration in ten tributaries by 2025.

The Chesapeake Clean Water Blueprint is working. However, to achieve the fishable, swimmable waters guaranteed by the Clean Water Act, holding jurisdictions accountable for their commitments is necessary. In September 2020, CBF along with its partners filed suit against EPA for failing to hold Pennsylvania and New York accountable to develop implementation plans that will achieve the 2025 Bay restoration goals.⁴⁶ This litigation is on-going.

The Current State of the Bay

The Chesapeake Bay Foundation released its 2021 State of the Blueprint report on Jan. 5, 2022.⁴⁷ The report assesses the collective progress to reduce pollution by the three primary Bay states—Maryland, Pennsylvania, and Virginia, which together account for approximately 90 percent of the pollution damaging the Chesapeake Bay.

To assess progress, we looked at two measures.

First, we used the Chesapeake Bay Program's scientific model⁴⁸ to estimate pollution reductions made between 2009 and 2020. For each state, we assessed both the total pollution reductions made statewide, as well as the reductions made by each sector (i.e., agriculture, wastewater, etc.) to determine if current trends put

⁴⁵ EPA CBP, Chesapeake Bay Watershed Agreement, https://www.chesapeakebay.net/what/what_guides_us/watershed_agreement.

⁴⁶ *Chesapeake Bay Foundation, et. al. v. United States Environmental Protection Agency, et. al.* Case No.: 1:20-cv-02529 (D.D.C. 2020).

⁴⁷ Chesapeake Bay Foundation, 2021 Chesapeake Bay State of the Blueprint, <https://www.cbf.org/document-library/cbf-reports/2021-state-of-the-blueprint-report.pdf>.

⁴⁸ EPA CBP, Chesapeake Assessment Scenario Tool, <https://cast.chesapeakebay.net/About>.

them on track to meet the 2025 Blueprint targets. This is an important distinction. While significant progress in one sector may put a state on track to meet its total 2025 goals today, states risk losing ground or even reversing progress in the future without action in all sectors.

Second, we looked at how well the states are implementing key practices and programs outlined in their two-year milestone commitments for 2020 and 2021—in other words, are they taking the specific actions they committed to in order to achieve their pollution-reduction targets? Plans are only good if they are implemented. By looking at whether or not the programs the plans call for are being put into place, our report assesses interim progress toward achieving some of these milestone targets as well as overall progress toward meeting the 2025 implementation deadline.

Our assessment of pollution-reduction progress to date found that Maryland, Pennsylvania, and Virginia—which together account for roughly 90 percent of the Bay's pollution—collectively will miss the Blueprint's 2025 implementation deadline. No state is completely on track. Model projections indicate Maryland and Virginia will be close to meeting their 2025 targets overall, though not for agriculture and urban/suburban runoff pollution. Pennsylvania remains far off track, threatening the Blueprint's success and the ability to restore its local waterways.

Critical Moment in Time to Protect This National Treasure

The Chesapeake Clean Water Blueprint is the best chance to save the Chesapeake Bay and its rivers and streams. As the 2025 deadline approaches, it is clear that the federal government – and the states – must take aggressive, urgent action if we are to leave a legacy of clean water, thriving fisheries, and vibrant coastal communities to future generations. On the federal level, there are seven agencies that are part of the Chesapeake Bay Watershed Agreement: EPA, U.S. Department of Agriculture, U.S. Department of Commerce, U.S. Department of Defense, U.S. Department of Homeland Security, U.S. Department of the Interior, and the U.S. Department of Transportation.⁴⁹ We are at a critical point where not only does EPA need to hold states accountable to their Blueprint commitments, but each federal agency needs to increase its capacity and resources to ensure that we restore this national treasure.

⁴⁹ EPA CBP, Chesapeake Bay Watershed Agreement, *supra* note 10.