

ARTICLES

40 YEARS OF CHESAPEAKE BAY RESTORATION: WHERE WE FAILED AND HOW TO CHANGE COURSE

by Jon A. Mueller

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SUMMARY

For more than half a century, the Chesapeake Bay and many of its tributaries have suffered from poor water quality. Compelled by an executive order and litigation, in 2010, EPA issued the Chesapeake Bay total maximum daily load (Bay TMDL) to reduce pollution discharges and thereby restore Bay water quality; unfortunately, the Bay TMDL will fail to meet its 2025 objective. This Article argues it is time for EPA to use the tools granted by Congress in the CWA to reduce pollution, and for the Bay jurisdictions to sign a binding and enforceable Bay agreement to ensure accountability. If CWA authorities and other legal mechanisms are fully utilized, they can achieve Bay restoration.

For more than half a century, the Chesapeake Bay and many of its tributaries have suffered from poor water quality, which has harmed natural resources and people who use the Bay as a source of income and recreation. In 1973, Maryland Sen. Mac Mathias, disturbed by declining crab, oyster, and fish harvests, undertook a five-day boat trip to survey Maryland's portion of the Chesapeake Bay.¹ That trip and his leadership led to a congressionally mandated study, which established that the Bay's woes were caused by too much nitrogen, phosphorus, and sediment, primarily from nonpoint sources like agriculture and runoff from development.² This study spawned the Chesapeake Bay Program, an arm of the U.S.

Editor's Note: Jon Mueller joined the Chesapeake Bay Foundation in 2004 as the organization's first director of litigation and became a vice president in 2009. As vice president for litigation, he developed and handled administrative and litigation matters in state and federal court, including some matters discussed in this Article.

1. Michael W. Fincham, *The Voyages of "Mac" Mathias*, CHESAPEAKE Q. (July 2015), <https://www.chesapeakequarterly.net/V14N2/main3/>.
2. U.S. ENVIRONMENTAL PROTECTION AGENCY, CHESAPEAKE BAY: A FRAMEWORK FOR ACTION (1983), https://d18lev1ok5leia.cloudfront.net/chesapeakebay/documents/Chesapeake_Bay_A_Framework_for_Action.pdf [hereinafter FRAMEWORK FOR ACTION]; 132 CONG. REC. S17410, at 4 (daily ed. Nov. 6, 1986).

Environmental Protection Agency (EPA), which the U.S. Congress appointed to ensure restoration of the Bay.³

Between 1983 and 2000, EPA and the Bay jurisdictions (D.C., Delaware, Maryland, New York, Pennsylvania, West Virginia, and Virginia) signed three Chesapeake Bay Agreements pledging to reduce discharge of these pollutants so they could remove the Bay from the Clean Water Act (CWA)⁴ list of impaired waters. All failed.

Compelled by an executive order and litigation, in 2010, EPA issued the Chesapeake Bay total maximum daily load (Bay TMDL) to reduce pollution discharges and thereby restore Bay water quality.⁵ The Bay TMDL exhibits two unique features. First, it set 2025 as the deadline for Bay jurisdictions to undertake actions that will attain sufficient pollution reduction to remove the Bay from the CWA §303(d) list of impaired waters. Second, the Bay TMDL contains a "Reasonable Assurance and Accountability Framework" section.⁶ There, EPA announced that it would require the Bay jurisdictions to meet two-year interim goals, and if a jurisdiction failed to meet those goals or

3. 33 U.S.C. §1267(b).
4. 42 U.S.C. §§9601-9675, ELR STAT. CERCLA §§101-405.
5. U.S. EPA, CHESAPEAKE BAY TOTAL MAXIMUM DAILY LOAD FOR NITROGEN, PHOSPHORUS, AND SEDIMENT (2010), <https://www.epa.gov/chesapeake-bay-tmdl/chesapeake-bay-tmdl-document> [hereinafter BAY TMDL].
6. *Id.* §7.

develop adequate pollution-reduction plans, the Agency would use its CWA authorities to take one or more of eight “backstop” actions.⁷

The courts have upheld the Bay TMDL, and it has been hailed by legal scholars.⁸ Unfortunately, the Bay TMDL will fail to meet its objective. In May 2023, the Chesapeake Bay Program revealed that the 2025 deadline will not be met and the Bay will not be restored if new approaches to curbing agricultural pollution and urban runoff are not taken.⁹ This view was echoed by the EPA Inspector General, who urged EPA to assume its role as leader of Bay restoration and to develop a new approach to addressing these pollution sources.¹⁰ Sadly, EPA rejected the Inspector General’s entreaty, and has not used its CWA authorities to ensure that the Bay jurisdictions meet their TMDL and Bay Agreement obligations. The Agency claims these are “discretionary” authorities and refuses to act.¹¹

The reason for the Bay TMDL’s demise is clear. Despite the Bay jurisdictions and EPA recognizing 40 years ago that agriculture and urban stormwater are the primary sources of Bay pollution and identifying the specific CWA legal mechanisms available, they have continually bowed to powerful economic and political interests and declined to use those mechanisms. This Article argues that it is time for EPA to stop resting on agency deference and use the tools granted by Congress in the CWA to reduce pollution, and for the Bay jurisdictions to sign a binding and enforceable Bay Agreement to ensure accountability.

Part I provides a brief description of the Chesapeake Bay, its natural resources, the primary sources contributing to its poor water quality, and why Bay restoration is imperative. Part II reviews the history of the Chesapeake Bay Agreements and their inability to restore Bay water quality. Part III examines the development of the Bay TMDL, the legal challenge to its issuance, and why citizens and Bay jurisdictions later sued EPA to enforce its terms.

Part IV evaluates progress implementing the Bay TMDL over the past 13 years and why the Bay jurisdictions will miss the 2025 deadline. Parts V and VI discuss

EPA’s failure to honor its TMDL commitments and some potential reasons why the Agency has not taken action. Part VII considers CWA authorities and other legal mechanisms that, if fully utilized, can achieve Bay restoration. Part VIII concludes.

I. The Chesapeake Bay

The Chesapeake Bay is North America’s largest and most biologically diverse estuary, home to more than 3,600 species of plants, fish, and animals.¹² The Bay watershed—the land area that contributes water to the Bay—covers 64,000 square miles from Cooperstown, New York, to Virginia Beach, Virginia. Delaware, Maryland, New York, Pennsylvania, Virginia, Washington, D.C., and West Virginia are each part of the Bay watershed.¹³ A national treasure, for more than 300 years the Bay and its tributaries have sustained the region’s economy and defined its traditions and culture.¹⁴ It is a resource of extraordinary value, worthy of the highest levels of protection and restoration.¹⁵

A. Poor Water Quality Is Destroying the Bay

Most of the Bay and its tidal waters have been identified as impaired under the CWA because of excess nutrients (nitrogen and phosphorus) and sediment.¹⁶ These pollutants cause algae blooms that, as they decay, consume oxygen, and create “dead zones” where fish and shellfish cannot survive, block sunlight that is needed for underwater grasses, and smother benthic organisms like oysters.¹⁷

Nitrogen and phosphorus are nutrients essential for the growth of plant life, both aquatic and terrestrial. In overabundance, however, these pollutants lead to the excessive growth of algae that die and decay—a process that blocks sunlight and sucks life-sustaining oxygen from the water. As water quality in the Bay and its tributaries degraded, the areal extent of underwater grasses essential to the sustainability of crab and fish populations declined.¹⁸ In addition, poor water quality contributed to a dramatic loss of oysters and other aquatic life critical to a healthy Bay. Poor water quality and the consequential loss of crabs, fish, and oysters

7. *Id.*

8. *American Farm Bureau Fed’n v. Environmental Prot. Agency*, 792 F.3d 281, 45 ELR 20129 (3d Cir. 2015), *cert. denied*, 577 U.S. 1138 (2016); Oliver A. Houck, *The Clean Water Act Returns (Again): Part I, TMDLs and the Chesapeake Bay*, 41 ELR 10208 (Mar. 2011).

9. SCIENTIFIC AND TECHNICAL ADVISORY COMMITTEE, CHESAPEAKE BAY PROGRAM, *ACHIEVING WATER QUALITY GOALS IN THE CHESAPEAKE BAY: A COMPREHENSIVE EVALUATION OF SYSTEM RESPONSE (2023)*, <https://www.chesapeake.org/stac/wp-content/uploads/2023/05/CESR-Final-update.pdf> [hereinafter CESR].

10. OFFICE OF INSPECTOR GENERAL, U.S. EPA, No. 23-E-0023, *THE EPA SHOULD UPDATE ITS STRATEGY, GOALS, DEADLINES, AND ACCOUNTABILITY FRAMEWORK TO BETTER LEAD CHESAPEAKE BAY RESTORATION EFFORTS (2023)*, https://www.epa.gov/system/files/documents/2023-07/_epaig_20230718-23-E-0023.pdf. Remarkably, EPA Region III largely rejected the Inspector General’s recommendations. Memorandum from Adam Ortiz, Regional Administrator, EPA Region III, to Steve Hanna, Acting Director of Programs, Offices, and Centers Oversight Directorate, EPA Office of Inspector General, Response to Office of Inspector General Final Report No. 23-E-0023 (Sept. 15, 2023).

11. See Defendants’ Memorandum in Support of Motion to Dismiss at 2, 9, *Chesapeake Bay Found. v. Environmental Prot. Agency*, No. 1:20-cv-2529 (CJN) (D.D.C. Nov. 20, 2020) [hereinafter Memorandum in Support of Motion to Dismiss].

12. Chesapeake Bay Program, *Bay Trivia—Flora and Fauna*, <https://www.chesapeakebay.net/discover/bay-trivia?categories=flora-fauna> (last visited Apr. 15, 2024).

13. *Id.*

14. Congress has recognized the Bay as a “national treasure and resource of worldwide significance.” Chesapeake Bay Restoration Act of 2000, Pub. L. No. 106-457, tit. II, §202, 114 Stat. 1957, 1967.

15. CHESAPEAKE BAY PROGRAM, *CHESAPEAKE 2000 (2000)*, http://www.chesapeakebay.net/documents/cbp_12081.pdf [hereinafter CHESAPEAKE 2000 AGREEMENT].

16. Chesapeake Progress, *Water Quality Standards Attainment and Monitoring*, <https://www.chesapeakeprogress.com/clean-water/water-quality> (last visited Apr. 15, 2024); Chesapeake Bay Program, *Sediment Runoff*, <https://www.chesapeakebay.net/issues/threats-to-the-bay/sediment-runoff> (last visited Apr. 15, 2024).

17. Chesapeake Bay Program, *Nutrient Runoff*, <https://www.chesapeakebay.net/issues/threats-to-the-bay/nutrient-runoff> (last visited Apr. 15, 2024).

18. FRAMEWORK FOR ACTION, *supra* note 2, at 18.

directly harmed and continues to harm commercial and recreational fishing.¹⁹

1. The Bay's Natural Resources Have Suffered

High levels of nutrients and sediment enter the water from agricultural operations, urban and suburban storm sewer systems, wastewater facilities, air pollution, and other sources. Despite reductions in pollution during the past 40 years, there has been insufficient progress toward meeting the water quality goals for the Bay. Only 28.1% of the Bay met water quality standards during 2018-2020.²⁰ Moreover, the bulk of these reductions have come from upgrades to wastewater treatment plants.²¹ Unfortunately, there is limited capacity to reduce pollution from this sector any further.²²

Major components of the ecosystem are compromised because water quality in the Bay and its tributaries remains degraded. Specifically, underwater grasses (submerged aquatic vegetation (SAV)) are critical to sustain crab and fish populations. Over the past few decades, the areal extent of SAV has drastically fluctuated.²³ SAV is a key indicator species of water quality in the Bay.²⁴

SAV provides food and shelter to a variety of Bay residents, including crabs, fish, and waterfowl. It also improves Bay water quality by generating oxygen as a part of photosynthesis. Most importantly, SAV utilizes nutrients like nitrogen and phosphorus as it grows.²⁵ However, for underwater grasses to grow, the water must be clear enough to allow sunlight to reach the bottom. Pollution from stormwater runoff has reduced the growth of SAV in the Bay. This runoff also carries nutrients, providing fuel for increased algae growth, which also blocks sunlight.²⁶

The total acreage of Bay grasses stands at approximately 41% of the restoration goal of 185,000 acres set in the 2014

Chesapeake Bay Agreement.²⁷ Without improved water quality, SAV acreage will continue to remain diminished in the Bay and its rivers leading to further losses of crabs and fish.

Poor water quality has also contributed to a dramatic loss of oysters. Researchers have estimated that the oyster population in the Bay is around 1% of its historic numbers. In addition to their commercial and recreational value, oysters are critical to improving water quality because they are filter feeders. An individual adult oyster can pump almost 50 gallons of water a day through its gills, which strain out food and pollutants.²⁸

Menhaden are also filter feeders and function as Bay cleansers. Menhaden are a primary source of food for fish like striped bass and birds like bald eagles and ospreys. Poor water quality harms menhaden by altering their prey and limiting oxygen available for them to survive. Without a strong, diverse population of menhaden, the Bay ecosystem would likely collapse.²⁹

In addition to its ecological importance, the Bay blue crab population is one of the most valuable commercial and recreational fisheries in the Bay. Blue crabs are a critical link in the Bay food web, serving as predators of benthic organisms and prey for striped bass and birds.³⁰ Unfortunately, low oxygen caused by pollution drives blue crabs from their preferred habitat and kills many of the small bottom organisms on which the blue crabs feed. The loss of SAV reduces the areas where juvenile crabs can hide from predators and grow.³¹

2. Poor Water Quality in the Bay Harms the Regional Economy

Since colonial times, a unique waterborne farmer known as a “waterman” has collected and distributed the Bay’s bounty. The culture and fishing practices of the waterman have been handed down from generation to generation for more than 300 years.³²

Watermen harvest many species of seafood from the Bay in different seasons of the year. In any given year, a Bay waterman may harvest blue crabs in the summer months, oysters in the fall, striped bass and perch in the winter months, either eels, catfish, yellow perch, or soft-shell clams in the spring, and back to crabbing in the summer.³³ On

19. In November 2023, the Maryland Department of Natural Resources imposed new limits on striped bass fisheries. *Maryland Summer-Fall Striped Bass Season Regulations Includes New Maximum Size to Conserve Spawning Stock*, MD. DEP’T NAT. RES. (May 15, 2023), <https://news.maryland.gov/dnr/2023/05/15/maryland-summer-fall-striped-bass-season-regulations-includes-new-maximum-size-to-serve-spawning-stock/>. These new limitations will harm both commercial and recreational fishing in the Bay. See Timothy B. Wheeler, *Striped Bass Harvest Restrictions Trigger Widespread Impact*, BAY J. (Mar. 1, 2024), https://www.bayjournal.com/news/fisheries/striped-bass-harvest-restrictions-trigger-widespread-impact/article_e5e19f68-d4c5-11ee-8f54-c37c5983df6c.html.

20. Chesapeake Progress, *supra* note 16. See also CHESAPEAKE BAY PROGRAM, BAY BAROMETER: HEALTH & RESTORATION IN THE CHESAPEAKE BAY WATERSHED 2022-2023, <https://d18lev1ok5leia.cloudfront.net/chesapeakebay/Bay-Barometer-2023.pdf>.

21. CESR, *supra* note 9, at 1.

22. See Section VII.A.2.

23. In 2023, researchers noted a slight increase in acreage. VIMS Staff & Jake Solyst, *Encouraging News for Underwater Grasses in Chesapeake Bay, Despite “Mystery” Losses Around Gunpowder and Middle Rivers*, VA. INST. MARINE SCI. (July 6, 2023), https://www.vims.edu/newsandevents/topstories/2023/sav_report_2022.php.

24. Chesapeake Bay Program, *Underwater Grasses*, <https://www.chesapeakebay.net/issues/whats-at-risk/underwater-grasses> (last visited Apr. 15, 2024).

25. *Id.*

26. Chesapeake Bay Program, *supra* note 16.

27. Chesapeake Progress, *Submerged Aquatic Vegetation (SAV)*, <https://www.chesapeakeprogress.com/abundant-life/sav> (last visited Apr. 15, 2024); CHESAPEAKE WATERSHED AGREEMENT (2014, as amended Oct. 5, 2022), <https://d18lev1ok5leia.cloudfront.net/chesapeakebay/Chesapeake-Bay-Watershed-Agreement-Amended.pdf>.

28. Chesapeake Bay Program, *Oysters*, <https://www.chesapeakebay.net/issues/whats-at-risk/oysters> (last visited Apr. 15, 2024).

29. Chesapeake Bay Program, *Menhaden*, <https://www.chesapeakebay.net/issues/whats-at-risk/menhaden> (last visited Apr. 15, 2024).

30. Chesapeake Bay Program, *Blue Crabs*, <https://www.chesapeakebay.net/issues/whats-at-risk/blue-crabs> (last visited Apr. 15, 2024).

31. *Id.*

32. See WILLIAM W. WARNER, *BEAUTIFUL SWIMMERS* (1976).

33. Sea Grant Maryland, *Watermen*, <https://www.mdsg.umd.edu/topics/watermen/watermen> (last visited Apr. 15, 2024).

average, commercial fishing generates approximately 500 million pounds of seafood a year.³⁴ In 2020, the commercial seafood industry in Maryland and Virginia accounted for more than 45,000 jobs, \$6.7 billion in sales, and \$1.6 billion in income.³⁵ A 1988 University of Maryland study valued the Bay at \$678 billion.³⁶

A 2014 study by the Chesapeake Bay Foundation (CBF) stated that in 2009, the Chesapeake Bay region—land and water—created economic benefits totaling \$107.2 billion annually. If the Bay jurisdictions fully implement the Bay TMDL, CBF claimed that these benefits will increase by \$22.5 billion to \$129.7 billion *annually*. However, without complete implementation, pollution loads will increase, and the value of the natural benefits will decline by \$5.6 billion to \$101.5 billion annually. Those benefits would continue to decline after 2025 as additional pollution continues to degrade the Bay watershed.³⁷

Sustainable fisheries, food, and habitat depend on good water quality. The revenues derived by the states from recreational fishing and boating are substantial. For example, in 2022, boating and fishing in Maryland was valued at more than \$552 million and in Virginia at more than \$554 million.³⁸ As sport fish stocks and water quality decline, so do public revenues associated with sportfishing and private sales of related stays, food, and travel.

In sum, until water quality improves, Bay natural resources will not improve, and unless they do, the regional economy will suffer, jobs will be lost, and recreational experiences will diminish.

B. Poor Bay Water Quality Is Not the Problem of Just One State

The Bay watershed is located within five states and the District of Columbia.³⁹ Thus, nutrients and sediment from

point sources (e.g., wastewater treatment plants) and non-point sources (e.g., crop fields and urban areas) entering the Susquehanna River in Cooperstown, New York, for example, harm water quality in the Bay hundreds of miles away.⁴⁰ This scenario is applicable to every major tributary within the 64,000-square-mile Bay watershed, making the problem immensely difficult to solve. Moreover, zeroing out discharges in one state will not solve the problem, and no state can direct another to limit its pollution.

The Bay jurisdictions and EPA acknowledged these facts when they signed the first Bay Agreement in 1983, and jointly participated in the development of the Chesapeake Bay watershed and water quality models to assign pollutant loads for waters within each jurisdiction.⁴¹ The object of this and subsequent Bay Agreements, and ultimately the Bay TMDL, was to develop implementation plans for each jurisdiction with specific actions to achieve the pollution reductions necessary for improving Bay water quality. If state progress was insufficient, then EPA:

committed to take appropriate contingency actions including targeted compliance and enforcement activities, expansion of requirements to obtain NPDES [national pollutant discharge elimination system—point source] permit coverage for currently unregulated sources, revision of the TMDL allocations and additional controls on federally permitted sources of pollution, such as wastewater treatment plants, large animal agriculture operations and municipal stormwater systems.⁴²

As explained below, EPA's commitment has flagged since 2010, stalling Bay restoration and jeopardizing the TMDL program, the Bay, and the nation's waters.

II. The Chesapeake Bay Agreements: 1983-2022

A. The First-Generation Agreements: 1983-1992

Maryland, Virginia, Pennsylvania, the District of Columbia, the Chesapeake Bay Commission, and EPA signed the first Chesapeake Bay Agreement in 1983.⁴³ The agreement outlined a cooperative, voluntary approach to improve management of the Bay's resources, but did not set specific pollution-reduction goals. It also created an Execu-

34. Sea Grant Maryland, *Chesapeake Bay Facts and Figures*, <https://www.mdsg.umd.edu/topics/ecosystems-restoration/chesapeake-bay-facts-and-figures> (last visited Apr. 15, 2024).

35. NATIONAL MARINE FISHERIES SERVICE, U.S. DEPARTMENT OF COMMERCE, NOAA TECHNICAL MEMORANDUM NO. NMFS-F/SPO-236A, FISHERIES ECONOMICS OF THE UNITED STATES 2020 (2023), <https://media.fisheries.noaa.gov/2024-01/FEUS-2020-final2-web.pdf>.

36. See GERALD KAUFFMAN ET AL., UNIVERSITY OF DELAWARE, SOCIOECONOMIC VALUE OF THE CHESAPEAKE BAY WATERSHED IN DELAWARE 4 (2011), <https://www.wrc.udel.edu/wp-content/uploads/2020/10/Socioeconomic-Value-of-the-Chesapeake-Bay-Watershed-in-Delaware-2011.pdf>.

The Chesapeake Bay Watershed Blue Ribbon Finance Panel (2004) concluded the bay was worth over a trillion dollars. Recreational boating in Maryland was measured at \$2 billion per year. Fishing activities in Pennsylvania resulted in \$4.7 billion a year in expenditures and generated 43,000 jobs in outfitting, guiding, and lodging.

See also Rebecca Hanmer, *Chesapeake's Value Worth More Than the Sum of Its Parts*, BAY J. (Mar. 20, 2020), https://www.bayjournal.com/archives/chesapeake-s-value-worth-more-than-the-sum-of-its-parts/article_2e0f0160-6131-5806-b28f-dee40ad681b6.html.

37. CBF, THE ECONOMIC BENEFITS OF CLEANING UP THE CHESAPEAKE (2014), <https://www.cbf.org/document-library/cbf-reports/the-economic-benefits-of-cleaning-up-the-chesapeake.pdf>.

38. Bureau of Economic Analysis, *Outdoor Recreation*, <https://www.bea.gov/sites/default/files/2023-11/orsa1123-State.xlsx> (last visited May 13, 2024).

39. BAY TMDL, *supra* note 5, at ES-4, 2-2 fig.2-1; Chesapeake Bay Program, *What Is a Watershed?*, <https://www.chesapeakebay.net/discover/watershed> (last visited Apr. 15, 2024).

40. The Chesapeake Bay Program modeled the loads of nitrogen delivered to the Bay by its major river basins. It concluded in 2009 that the Susquehanna River contributes 46% of the nitrogen, 26% of the phosphorus, and 33% of the sediment loads to the Bay. BAY TMDL, *supra* note 5, at 4-3.

41. *Id.* at 1-4 through 1-8.

42. *Id.* at ES-2.

43. CHESAPEAKE BAY PROGRAM, THE CHESAPEAKE BAY AGREEMENT OF 1983, https://d18lev1ok5leia.cloudfront.net/chesapeakebay/documents/1983_CB_Agreement2.pdf. Created in 1980, the Chesapeake Bay Commission is a tri-state (Maryland, Pennsylvania, and Virginia) legislative commission created by the passage of similar laws in each state. Chesapeake Bay Commission, *Home Page*, <https://www.chesbay.us/> (last visited Apr. 15, 2024).

tive Council to assess and oversee implementation of coordinated plans, to improve water quality and the living resources of the Bay, and to establish an Implementation Committee to coordinate and evaluate management plans.⁴⁴ The Executive Council later created other committees, including the Principals' Staff Committee and the Scientific and Technical Advisory Committee.⁴⁵

Recognizing that the 1983 agreement did not provide concrete directives for pollution reduction, in 1987, the same three states, the District of Columbia, the Chesapeake Bay Commission, and EPA signed a new Bay Agreement.⁴⁶ This agreement included goals, objectives, and commitments with deadlines. Importantly, the water quality goal included a commitment to “develop, adopt, and begin implementation of a basin-wide strategy to equitably achieve by the year 2000 at least a 40% reduction” in nutrients entering the main stem of the Bay. This reduction target was to be reevaluated in December 1991.

Based upon the 1991 reevaluation, the 1987 agreement was amended in 1992, reaffirming the 1987 nutrient-reduction goal.⁴⁷ The signatories to the amendment committed to achieving this goal by 2000 and recognized the outsized role tributaries played in delivering pollution to the Bay.

Tellingly, the signatories recognized the sizeable pollution contribution from agriculture and developed land and the need to intensify efforts if they were to be successful. Unfortunately, the signatories hedged their bets, stating that “[a]chieving a 40 percent nutrient reduction goal, in at least some cases, challenges the limits of current point and nonpoint source control technologies.”⁴⁸ As one could expect, no signatory attained its self-assigned goals.

B. Chesapeake 2000 and § 117(g)—The Pledge to Remove the Bay From the Impaired List and a Congressional Mandate for EPA

1. Chesapeake 2000

On June 28, 2000, the Chesapeake Bay Commission signed Chesapeake 2000 (the 2000 Bay Agreement) with

the United States, Maryland, Pennsylvania, Virginia, and the District of Columbia.⁴⁹ The 2000 agreement incorporated and reaffirmed the commitments made in 1983, 1987, and 1992 by the signatories, and outlined specific targets in five areas: the protection and restoration of the Bay's (1) living resources, (2) vital habitat, and (3) water quality, as well as (4) a commitment by the signatories to implement sound land use strategies, and (5) increased stewardship and community engagement.

The objective of the 2000 agreement was to sufficiently reduce pollution to the Bay so the states and EPA could remove it from the CWA §303(d) impaired waters list prior to 2010. The Bay partners did not select the date arbitrarily. It was predicated upon a consent decree EPA signed with a citizens group, in which EPA agreed it would develop a TMDL for Virginia's portion of the Bay by May 2011 if Virginia failed to do so by 2010.⁵⁰

In response, each Bay jurisdiction developed its own “tributary strategy.”⁵¹ These strategies served as quasi-TMDLs, setting voluntary nutrient and sediment load reductions from point and nonpoint sources to meet assigned pollutant cap loads. Unfortunately, it became apparent in 2007 that EPA and the Bay jurisdictions would fail to meet the 2010 deadline for restoring the Bay.

2. CWA § 117(g)—Mandatory or Discretionary?

In concert with the 2000 agreement, Congress passed the Estuaries and Clean Water Act of 2000.⁵² The Act included the Chesapeake Bay Restoration Act of 2000.⁵³ There, Congress added subsection (g) to the Chesapeake Bay-specific provision of the CWA, §117. The subsection provides that the EPA Administrator “shall ensure that management plans are developed and implementation is begun by signatories of the Chesapeake Bay Agreement to achieve and maintain,” among other things, the nutrient and water quality requirements necessary to restore the Bay.⁵⁴

This statutory provision has been the subject of two lawsuits brought by CBF: one in 2009, along with signatories to the prior Bay Agreements, and another in 2020 by two Virginia citizens; the Maryland Watermen's Association; Anne Arundel County, Maryland; Delaware; D.C.; Maryland; and Virginia.⁵⁵ Each lawsuit was settled

44. The Executive Council comprises the governors of the watershed states, the mayor of D.C., the chair of the Chesapeake Bay Commission, and the Administrator of EPA. Chesapeake Bay Program, *Chesapeake Executive Council*, <https://www.chesapeakebay.net/who/group/chesapeake-executive-council> (last visited Apr. 15, 2024).

45. Chesapeake Bay Program, *Scientific and Technical Advisory Committee*, <https://www.chesapeakebay.net/who/group/stac> (last visited Apr. 15, 2024); Chesapeake Bay Program, *Principals' Staff Committee*, <https://www.chesapeakebay.net/who/group/principals-staff-committee> (last visited Apr. 15, 2024).

46. Chesapeake Bay Program, *Chesapeake Bay Agreement—1987*, <https://www.chesapeakebay.net/what/publications/chesapeake-bay-agreement-1987> (last visited Apr. 15, 2024).

47. Chesapeake Bay Program, *Our History*, <https://www.chesapeakebay.net/who/bay-program-history> (last visited Apr. 15, 2024).

48. The accuracy of this statement is questionable. While in 1992 wastewater treatment technologies were not as effective as they are today, nonpoint source best management practices (BMPs) like fencing and vegetated stream buffers were widely known and available, but, like today, they were voluntary.

49. CHESAPEAKE 2000 AGREEMENT, *supra* note 15.

50. *American Canoe Ass'n v. Environmental Prot. Agency*, 54 F. Supp. 2d 621, 29 ELR 21315 (E.D. Va. 1999).

51. U.S. EPA, *Chesapeake Bay Tributary Strategies*, <https://www.epa.gov/chesapeake-bay-tmdl/chesapeake-bay-tributary-strategies> (last updated Dec. 5, 2023). See *Bedford v. Pennsylvania Dep't of Env't Prot.*, 972 A.2d 53 (Pa. Commw. Ct. 2009).

52. Congress recognized that the Bay is a “national treasure and resource of worldwide significance.” Chesapeake Bay Restoration Act of 2000, Pub. L. No. 106-457, tit. II, §202, 114 Stat. 1957, 1967.

53. 33 U.S.C. §1267, CWA §117.

54. 33 U.S.C. §1267(g).

55. *Fowler v. Environmental Prot. Agency*, No. 1:09-CV-00005-CKK (D.D.C. Jan. 5, 2009); *Chesapeake Bay Found. v. Environmental Prot. Agency*, No. 1:20-cv-2529 (CJN) (D.D.C. Nov. 20, 2020). [Editor's Note: Jon Mueller was counsel for CBF in each of these matters as vice president for litigation to CBF.]

with agreements by EPA that it would take specific actions to reduce Bay pollution and exercise its authorities under the CWA.⁵⁶

Despite Congress' use of the word "shall," EPA and the U.S. Department of Justice (DOJ) have argued that EPA has no mandatory obligation to use its CWA authorities to require the Bay jurisdictions or those polluting the Bay to reduce pollution to the Bay.⁵⁷ The United States did not file an answer or dispositive motion in *Fowler v. Environmental Protection Agency*. In the *Chesapeake Bay Foundation v. Environmental Protection Agency* action, EPA affirmatively asserted in a motion to dismiss that §117(g) does not impose a mandatory duty upon the Agency.⁵⁸ The government steadfastly maintained that the section gives EPA blanket discretion to determine whether to use CWA powers granted by Congress as a means of insuring pollution reductions by the Bay jurisdictions.⁵⁹

C. 2014 Chesapeake Bay Agreement— Amended in 2022

As more thoroughly explained in the next part, EPA and the Bay jurisdictions issued the Bay TMDL in December 2010. In 2014, the Chesapeake Bay Commission, the Bay jurisdictions, and EPA agreed to issue a new Chesapeake Bay Agreement, which adopted the Bay TMDL nutrient reductions as its water quality goal and outcome.⁶⁰ The agreement was amended by the signatories in 2020 to address diversity, fish passage, and land use methods and metrics.⁶¹ It was amended again in 2022 to address the use of the word "citizen."⁶²

Predictably, like all prior voluntary Bay Agreements, this agreement has also failed to restore the Bay. Yet, despite four failed efforts over 40 years, some are calling for a new post-2025 Bay Agreement. As discussed in Section VII.C below, if that agreement does not require mandatory actions and is not legally enforceable, a similar outcome is certain.

56. The *Fowler* matter was resolved by settlement agreement requiring EPA to, among other things, issue a Bay TMDL by December 31, 2010. Regrettably, in the *Fowler* matter, EPA failed to fully deliver on its obligations. For example, EPA agreed to amend the concentrated animal feeding operation (CAFO) regulations to address animal pollution to waters of the United States. EPA later reneged on that promise as too difficult a task. The parties settled the *Chesapeake Bay Foundation* action in a similar fashion. There, EPA agreed to consider using the CWA authorities identified in the Bay TMDL to reduce pollution from Pennsylvania.

57. The government's legal position led to the resolution of the *Fowler* and *Chesapeake Bay Foundation* actions by settlement agreement, not judicially enforceable consent decrees.

58. Memorandum in Support of Motion to Dismiss, *supra* note 11.

59. See *infra* Part V. The Bay TMDL refers to these powers as "backstops."

60. CHESAPEAKE WATERSHED AGREEMENT, *supra* note 27, at 7.

61. *Id.* at 17.

62. *Id.* at 20.

III. The Bay TMDL

Spurred by prior legal actions⁶³ and failure to remove the Bay from the impaired waters list,⁶⁴ on December 29, 2010, EPA issued the Bay TMDL.⁶⁵ The document required each of the seven Bay jurisdictions to reduce their respective discharges of nitrogen, phosphorus, and sediment according to assigned allocations for point sources and nonpoint sources in 92 Bay watershed segments.⁶⁶

EPA required each jurisdiction to write watershed implementation plans (WIPs) in three phases over a seven-year period explaining the actions each would take to meet their respective pollution allocations. To monitor progress, the jurisdictions were to meet interim milestones set forth in each WIP phase. Further, in 2018, EPA was to undertake a "midpoint assessment" of each jurisdiction's progress.⁶⁷ The states were to complete the work identified in their final Phase III WIPs by 2025.

EPA also agreed to ensure that jurisdictions wrote adequate WIPs supported by sufficient funding and implemented on time.⁶⁸ EPA would monitor interim milestone compliance. If a jurisdiction failed to meet its obligations, EPA intended to take "additional federal actions" to ensure implementation. This included limiting grant funds or adjusting a jurisdiction's final WIP if it was behind at the midpoint assessment.⁶⁹ Ostensibly, those actions would lead to TMDL compliance. The Bay jurisdictions, for the most part,⁷⁰ accepted EPA's role as the TMDL cop.

While advocates and governments hailed the Bay TMDL as the program that would lead to Bay restoration, not all pollution sources accepted the plan. Days after EPA published the document in the *Federal Register*, a conglomeration of agricultural and development nonpoint sources challenged its legality.⁷¹ Recognizing that the Bay TMDL

63. *American Canoe Ass'n v. Environmental Prot. Agency*, 54 F. Supp. 2d 621, 29 ELR 21315 (E.D. Va. 1999); *Fowler v. Environmental Prot. Agency*, No. 1:09-CV-00005-CKK (D.D.C. Jan. 5, 2009).

64. See CHESAPEAKE 2000 AGREEMENT, *supra* note 15.

65. BAY TMDL, *supra* note 5.

66. *Id.* apps. R and Q.

67. By 2017, the Bay TMDL midpoint, the Bay jurisdictions were to have practices in place to achieve 60% of their respective pollution reductions. U.S. EPA, *Chesapeake Bay TMDL Midpoint Assessment*, <https://www.epa.gov/chesapeake-bay-tmdl/chesapeake-bay-tmdl-midpoint-assessment> (last updated Oct. 4, 2023).

68. BAY TMDL, *supra* note 5, §7.2 (Accountability Framework) (EPA "commit[s] to take appropriate federal actions if the jurisdictions fail to develop sufficient WIPs, effectively implement their WIPs, or fulfill their 2-year milestones."). The president directed EPA to "build a new accountability framework that guides" Bay restoration. See also CHESAPEAKE WATERSHED AGREEMENT, *supra* note 27 (Goals & Outcomes (2014 and 2020)); 33 U.S.C. §1267(g).

69. BAY TMDL, *supra* note 5, §7. The CWA or a supporting regulation authorizes each "federal action" or "backstop." See *infra* Part V.

70. Initially, Virginia objected to EPA's use of CWA laws to compel states to meet their Bay TMDL obligations. See Letter from Robert F. McDonnell, Governor of Virginia, to Lisa P. Jackson, EPA Administrator 3 (June 15, 2010). The commonwealth has since recognized the validity of such actions. See Settlement Agreement, *Chesapeake Bay Found. v. Environmental Prot. Agency*, Civ. No. 1:20-cv-2529 (D.D.C. July 10, 2023), https://www.epa.gov/system/files/documents/2023-09/FINAL_ChesapeakeBay_Signed_SettlementAgreement.pdf.

71. *American Farm Bureau Fed'n v. Environmental Prot. Agency*, 792 F.3d 281, 45 ELR 20129 (3d Cir. 2015).

represented the best chance for improving Bay water quality and that losing the TMDL would mean stricter pollution limits on point sources, numerous citizen groups and municipal wastewater organizations intervened on behalf of EPA. Both the district court and the U.S. Court of Appeals for the Third Circuit upheld the TMDL. In 2016, the U.S. Supreme Court denied certiorari.⁷²

IV. TMDL Progress Is Stalled

With validation from the Bay jurisdictions and the courts, the Bay TMDL was seen as the road map for Bay restoration by 2025. Shortly after the Bay TMDL was issued, Prof. Oliver Houck stated in the *Environmental Law Reporter*: “The die is now cast. We may restore the Chesapeake, or we may not, but at least, at last, in this one place, for at least this moment, we can say we really tried.”⁷³ High praise at the time.

We know now that the “Bay Partnership” (the Bay jurisdictions and EPA) will not meet the 2025 deadline. Why, can be answered simply: the failure of EPA and the Bay jurisdictions to tackle head-on the two primary pollution sources, agriculture and developed land.⁷⁴ Such failures were to be addressed through CWA §117(g) and the TMDL’s “Accountability Framework,” both of which identified EPA as the lead authority for ensuring TMDL success. Regrettably, EPA has ignored its statutory mandate, fallen back on its promises, and, as the EPA Inspector General recently found, failed to lead.

The following sections examine the pollution sources where the TMDL has been the most ineffective. Surprisingly, these are the same sectors EPA identified in 1983 as the prime sources of Bay pollution.⁷⁵

A. The Agriculture Sector Is Grossly “Off Target”

Save West Virginia, all Bay jurisdictions are failing to meet their TMDL obligations. While the states have achieved significant pollution reductions from wastewater treatment plants, reductions from other sectors are lagging, most importantly agriculture, given its outsized importance to Bay restoration.⁷⁶ Pennsylvania is dramatically off course. Unfortunately, the bulk of the actions necessary to meet Pennsylvania’s goals are to be undertaken on farms.⁷⁷

In 2022, CBF assessed progress in Maryland, Pennsylvania, and Virginia. It found that Pennsylvania and Virginia were “off track” for meeting their agricultural nitrogen and phosphorus goals.⁷⁸ Maryland was “in danger of being off track” for its agricultural nitrogen goal and was “off track” for its agricultural phosphorus goal.⁷⁹ The notable lack of progress in Pennsylvania has been continuous, and past efforts to accelerate progress have failed.

EPA has found Pennsylvania to be “off track” on numerous occasions over the past 13 years and subjected the state to increased EPA “oversight.” When that oversight failed to spur action in 2015, EPA withheld grant funding for water projects in the commonwealth. In response, Governor Tom Wolf’s administration developed a “reboot” strategy that was designed to increase agricultural best management practice (BMP) (e.g., stream fencing and riparian buffer) installation.⁸⁰ The strategy required the 33,000 farms in Pennsylvania’s portion of the Bay watershed to be inspected.⁸¹

Based on the Pennsylvania Department of Environmental Protection’s (DEP’s) representations concerning the projected effectiveness of its strategy, EPA released the grant funds in 2016. However, according to DEP, the strategy failed to accelerate progress due to the lack of funding and farm inspectors.⁸² Despite this failure, EPA took no further action against the state and continues to allow DEP

vania’s Phase III WIP, EPA noted that the state’s plan would only achieve 75% of its required nitrogen load reduction. U.S. EPA, EVALUATION OF PENNSYLVANIA’S PHASE III WATERSHED IMPLEMENTATION PLAN (WIP) 1, 3, 5, 6, 9 (2019), <https://www.epa.gov/sites/default/files/2019-12/documents/pa.pdf>.

78. CBF, *Pennsylvania’s Blueprint for Clean Water*, <https://www.cbf.org/how-we-save-the-bay/chesapeake-clean-water-blueprint/state-of-the-blueprint/pennsylvanias-2022-blueprint-for-clean-water.html> (last visited Apr. 15, 2024) [hereinafter *Pennsylvania’s Blueprint for Clean Water*]; CBF, *Virginia’s Blueprint for Clean Water*, <https://www.cbf.org/how-we-save-the-bay/chesapeake-clean-water-blueprint/state-of-the-blueprint/virginias-2022-blueprint-for-clean-water.html> (last visited Apr. 15, 2024) [hereinafter *Virginia’s Blueprint for Clean Water*]. CBF defines “off track” as “more than 25% off target or pollution is increasing.”

79. CBF, *Maryland’s Blueprint for Clean Water*, <https://www.cbf.org/how-we-save-the-bay/chesapeake-clean-water-blueprint/state-of-the-blueprint/marylands-2022-blueprint-for-clean-water.html> (last visited Apr. 15, 2024).

80. The reboot strategy is no longer on the Pennsylvania Department of Environmental Protection’s (DEP’s) website. A 2016 article provides details of the plan that focused on six elements, including the installation of agricultural BMPs. *Agencies Unveil New Chesapeake Bay Cleanup Strategy, New Growing Greener Ahead*, PA. ENV’T DIG. (Jan. 25, 2016), <http://www.paenvironmentdigest.com/newsletter/default.asp?NewsletterArticleID=34611>.

81. PENNSYLVANIA DEPARTMENT OF AGRICULTURE, A DEP STRATEGY TO ENHANCE PENNSYLVANIA’S CHESAPEAKE BAY RESTORATION EFFORT (2016), <https://files.dep.state.pa.us/Water/ChesapeakeBayOffice/DEP%20Chesapeake%20Bay%20Restoration%20Strategy%20012116.pdf>.

82. Timothy B. Wheeler, *PA’s Chesapeake Bay Reboot Strategy to Improve Water Quality May Need Kick-Start*, CHESAPEAKE BAY J. (Aug. 15, 2016), [reposted at http://www.paenvironmentdigest.com/newsletter/default.asp?NewsletterArticleID=36829](http://www.paenvironmentdigest.com/newsletter/default.asp?NewsletterArticleID=36829). See also PENNSYLVANIA DEP, PENNSYLVANIA PHASE 3 CHESAPEAKE BAY WATERSHED IMPLEMENTATION PLAN 29 (draft April 2019). According to the draft WIP, DEP and conservation district staff inspect 10% of farms in the Bay watershed annually pursuant to the Chesapeake Bay Agricultural Inspection Program. DEP also claims that it and the conservation districts inspect all CAFOs in the state annually for compliance with Pennsylvania’s Nutrient Management Program and at least once every five years for compliance with the NPDES program. *Id.* at 35. These statements are unconfirmed.

72. *Id.*

73. Houck, *supra* note 8, at 10208.

74. CESR, *supra* note 9, at v.

75. FRAMEWORK FOR ACTION, *supra* note 2, at 68.

76. Chesapeake Progress, *2025 Watershed Implementation Plans (WIPs)*, <https://www.chesapeakeprogress.com/clean-water/watershed-implementation-plans> (last visited May 13, 2024); CESR, *supra* note 9, at 1, 20.

77. Pennsylvania has continually maintained that it will meet TMDL load reductions by reducing all agricultural nutrient and sediment loads by 75%. See CHESAPEAKE BAY COMMISSION, HEALTHY LIVESTOCK, HEALTHY STREAMS: POLICY ACTIONS TO PROMOTE LIVESTOCK STREAM EXCLUSION 18 (2015), <https://www.chesbay.us/library/public/documents/Policy-Reports/Healthy-Livestock-Healthy-Streams.pdf>; PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, PENNSYLVANIA PHASE 3 CHESAPEAKE BAY WATERSHED IMPLEMENTATION PLAN (2019, amended July 2022), https://files.dep.state.pa.us/Water/ChesapeakeBayOffice/WIP/III/FinalPlan/FINAL_AMENDED_PA_PHASE_3_WIP.pdf. In its evaluation of Pennsylv-

to administer a flawed concentrated animal feeding operation (CAFO) program.⁸³

Pennsylvania's dismal progress in agricultural BMP installation is not unique. Progress reports for 2021 show the Bay jurisdictions plan to remove more than 37 million pounds of nitrogen by 2025. Based upon their Phase III WIPs, the states are relying on agricultural BMPs to achieve roughly 94% of the remaining nitrogen reductions (34.8 million pounds). Virginia and Pennsylvania both expect to meet 90% of their remaining pollution reductions from agriculture.⁸⁴ That level of progress is highly unlikely, especially given past performance.

The Chesapeake Bay Program's monitoring and tracking arm, Chesapeake Progress, states that the outlook for meeting the 2025 TMDL goal is "off course" because the BMPs necessary to meet the 2021 targets for nitrogen and phosphorus were not in place.⁸⁵ This navigational disorientation is most pronounced in Pennsylvania. During the 12 years from 2009-2021, the commonwealth reduced its nitrogen load by nine million pounds. Currently, it needs to reduce nitrogen by 31 million pounds in two years.⁸⁶ At current levels of implementation and investment, this is an impossible task.

A 2023 *Bay Journal* article succinctly summed up the problem: "To meet Bay restoration goals, Delaware, Maryland, New York, Pennsylvania, and Virginia each count on achieving most of their future nutrient reductions by slashing runoff from agriculture. At the pace of the last decade, *the region would not reach those goals for another half century.*"⁸⁷ This dismal progress has not been for lack of trying. There are numerous watershed groups that have

spent considerable effort offering farmers grant funding and technical assistance for BMP installation.⁸⁸

Further, some farmers have wanted to take advantage of federal grant programs like the Conservation Stewardship Program (CSP) and the Environmental Quality Incentive Program (EQIP) that would help pay for such BMPs, but during 2010-2020, 70% to 80% of the applications went unfunded.⁸⁹ That does not mean, however, that every farm in the watershed has applied for federal funding but has been denied. In 2020, only 8.5% of Pennsylvania farms applied for some form of federal funding.⁹⁰ Even if the same percentage of farms applied for federal funding for BMPs over the next 10 years, the gap to meet WIP goals would not be closed.

EPA has recognized that Pennsylvania could improve reductions in nutrient and sediment loading by using its existing regulatory programs to *require* implementation of BMPs or, among other things, to increase the number of operations that are required to implement BMPs or obtain permits. However, EPA acknowledged that Pennsylvania's implementation of these BMPs will continue to rely on *voluntary implementation* through *nonregulatory programs* such as grants and technical assistance, as available.⁹¹ Thus, despite recognizing that Pennsylvania is significantly behind in pollution reduction from agriculture and that voluntary programs have not worked, EPA refuses to use its existing federal authorities and direct Pennsylvania to address farm pollution.⁹² This will only exacerbate the problems caused by agricultural water pollution in Pennsylvania.

Every two years, states must identify waters within their jurisdiction that fail to meet water quality standards (i.e., are impaired), and the cause of the impairment if known.⁹³ In 2022, DEP updated its Integrated Water Quality Report from 2020.⁹⁴ Many of the identified impairments are due to agriculture either from manure runoff or stream bank ero-

83. EPA has authorized DEP to administer the Point Source Permitting Program in Pennsylvania, including the CAFO permitting program. However, Pennsylvania law prohibits DEP from requiring stream fencing (livestock exclusion) in any permit it issues. 35 PA. STAT. §691.702. DEP has advised EPA that this law has adversely affected its ability to meet state Bay TMDL obligations. PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, *supra* note 77, at 103. Moreover, the statutory prohibition violates the CWA. 40 C.F.R. §122.42(e)(1)(iv). Why EPA has refused to withdraw DEP's CWA delegation for the program is unknown. 33 U.S.C. §1342(c)(3).

84. *Virginia's Blueprint for Clean Water*, *supra* note 78; *Pennsylvania's Blueprint for Clean Water*, *supra* note 78.

85. For example, the forest buffer goal is "off course." Chesapeake Progress, *Forest Buffers*, <https://www.chesapeakeprogress.com/abundant-life/forest-buffers> (last visited Apr. 15, 2024) ("The Chesapeake Bay Program has not met its goal for riparian forest buffers since 2002 . . ."). Yet, EPA continues to paint a rosy picture of buffer management. Jake Solyst, *Annual Report Provides Updates on 18 Watershed Agreement Outcomes*, CHESAPEAKE BAY PROGRAM (Jan. 24, 2024), <https://www.chesapeakebay.net/news/blog/annual-report-provides-updates-on-18-watershed-agreement-outcomes> ("In 2021, partners working towards the Forest Buffers Outcome planted 230.5 miles of forest buffers, the most per year since 2016.")

86. Chesapeake Progress, *2025 Watershed Implementation Plans (WIPs)*, <https://www.chesapeakeprogress.com/clean-water/watershed-implementation-plans> (last visited Apr. 15, 2024).

87. Karl Blankenship, *Chesapeake Bay Cleanup Faces Difficult Trade-Offs With Agriculture*, *BAY J.* (May 1, 2023), https://www.bayjournal.com/news/policy/chesapeake-bay-cleanup-faces-difficult-trade-offs-with-agriculture/article_896365bc-e43b-11ed-beac-b396d2795ed7.html (emphasis added). As we are now 40 years into the "project," and if this assessment is correct, it will have taken 90 years to restore the Bay.

88. *See, e.g.*, Alliance for the Chesapeake Bay, CBF, Chesapeake Conservation Partnership, and Future Harvest. Numerous educational institutions within the Bay watershed also offer technical assistance to farmers (e.g., University of Maryland, Pennsylvania State University, and Virginia Polytechnic Institute and State University).

89. *See* Michael Happ, *Closed Out: How U.S. Farmers Are Denied Access to Conservation Programs*, INST. FOR AGRIC. & TRADE POL'Y (Sept. 9, 2021), <https://www.iatp.org/documents/closed-out-how-us-farmers-are-denied-access-conservation-programs>.

90. PENNSYLVANIA DEPARTMENT OF AGRICULTURE, *supra* note 81. Five hundred thirty-four Pennsylvania farms applied for CSP and 2,259 applied for EQIP. The statistics in Maryland and Virginia are no better. In 2020, 1,910 Virginia farms and 856 Maryland farms, respectively, applied for either CSP or EQIP funding. Thus, a lack of funding is not the critical impediment. There simply are not enough applicants. Rebecca Chillrud, *Helping Farmers Help Our Waterways*, CHESAPEAKE BAY PROGRAM (Jan. 30, 2019), <https://www.chesapeakebay.net/news/blog/helping-farmers-help-our-waterways>.

91. U.S. EPA, EVALUATION OF PENNSYLVANIA'S FINAL AMENDED PHASE III WATERSHED IMPLEMENTATION PLAN 4 (2022) (on file with author).

92. There is no recorded instance of EPA designating a small animal feeding operation (AFO) in the Bay watershed as needing a CWA discharge permit. 40 C.F.R. §122.23(c).

93. 33 U.S.C. §1313(d).

94. PENNSYLVANIA DEP, INTEGRATED WATER QUALITY REPORT—2022, <https://www.dep.pa.gov/Business/Water/CleanWater/WaterQuality/Integrated-WatersReport/Pages/2022-Integrated-Water-Quality-Report.aspx>; Pennsylvania DEP, *2022 Integrated Report Viewer*, <https://gis.dep.pa.gov/IRViewer2022/> (last visited Apr. 15, 2024) (click "export statewide data" to down-

V. EPA's Failure to Honor Its Bay TMDL Commitments Has Been the Primary Impediment to Success

The Bay TMDL contains a “Reasonable Assurance and Accountability Framework.”¹⁰⁷ There, EPA identified two features that were not part of the TMDL itself, but were self-imposed obligations designed to ensure Bay restoration. One, “Reasonable Assurance,” is an EPA policy applied to TMDLs nationwide. EPA evaluates all TMDLs to ensure they will reduce pollution sufficiently to lead to restored water quality in the impaired body of water.¹⁰⁸ Here, EPA focuses on whether “nonpoint source controls will achieve expected load reductions.”¹⁰⁹ EPA examines nonpoint sources because it presumes that point source pollution dischargers will meet the enforceable limits of their permits.¹¹⁰

The other, “Accountability,” is unique to the Bay TMDL and was drafted to show EPA meant business: either the jurisdictions would meet their interim obligations or EPA would use its CWA authorities to compel reductions.¹¹¹ EPA identified eight specific actions (aka “backstops,” described below) it could take if a jurisdiction failed to

- submit WIPs consistent with EPA’s expectations;
- develop two-year milestones consistent with EPA’s expectations;
- achieve each set of two-year milestones;
- propose point source permits to meet the TMDL waste load allocations (WLAs); or
- develop “appropriate mechanisms to ensure that nonpoint source load allocations are achieved.”¹¹²

The two features were to work hand-in-glove to ensure the Bay TMDL would achieve its goals by 2025. Unfortunately, EPA has not utilized either of them in a reliable manner.

It will be interesting to see if EPA objects to the ammonia manufacturing plant slated for West Virginia, part of the Bay airshed. The plant is projected to emit more than 50 tons of nitrogen oxide per year. Brendan Gibbons, *World’s Largest Ammonia Complex Would Make Fertilizer From Natural Gas in West Virginia Coalfields*, OIL & GAS WATCH (Mar. 6, 2024), <https://news.oilandgaswatch.org/post/worlds-largest-ammonia-complex-would-make-fertilizer-from-natural-gas-in-west-virginia-coalfields>. Much of that nitrogen pollution will either fall on Bay waters or be washed off the land into Bay tributaries. BAY TMDL, *supra* note 5, at 4-33.

The TMDL set a cap of 15.7 million pounds per year using existing regulatory authorities, *id.* at ES-6 to ES-7, §6.4.1, and aims to reduce delivered nitrogen loads by 3.4 million pounds by 2025. *Id.* §7.2.2. Whether the closure of coal-fired power plants, for example, will offset new loads like those from the ammonia plant is not clear. See Douglas A. Burns et al., *Atmospheric Nitrogen Deposition in the Chesapeake Bay Watershed: A History of Change*, 251 ATMOSPHERIC ENV’T 118277 (2021), <https://www.science-direct.com/science/article/pii/S1352231021000959> (ammonia emissions data, which includes agricultural and mobile sources, are highly uncertain).

107. BAY TMDL, *supra* note 5, §7.

108. *Id.* §7.1.

109. *Id.* at 7-1.

110. *Id.*

111. *Id.* §7.2.4.

112. *Id.* at 7-11 to 7-12.

A. EPA Has Not Consistently Applied Its Reasonable Assurance Policy

In the context of the Bay TMDL, EPA applied reasonable assurance to its evaluation of each phase of each state’s WIPs to ensure that they provide sufficient information to establish that they will meet their TMDL pollution limits. To avoid the failures of prior Bay Agreements and tributary strategies, EPA created interim, two-year milestones that would allow EPA to consistently monitor state progress up to 2025.¹¹³ Importantly, the Bay TMDL set a “midpoint assessment” goal that 60% of the reductions to achieve Bay water quality standards would occur no later than 2017.¹¹⁴ EPA committed “to take appropriate federal actions if the jurisdictions fail to develop sufficient WIPs, effectively implement their WIPs, or fulfill their 2-year milestones.”¹¹⁵

In 2010, EPA “closed the reasonable assurance gap” for New York and West Virginia in their respective Phase I WIPs by transferring nonpoint source loads from agriculture to point sources such as wastewater treatment plants.¹¹⁶ In doing so, EPA gained reasonable assurance that the dischargers would meet those loads pursuant to an enforceable NPDES permit.¹¹⁷

As explained above, in 2015, EPA again exerted its CWA authority to revoke Pennsylvania’s revolving fund grants when the state failed to provide an implementation plan that met EPA’s reasonable assurance standards.¹¹⁸ EPA did not restore those funds until Pennsylvania developed and began to implement a plan to spark reductions in agricultural pollution. Regrettably, when that plan failed, EPA did not act in accordance with the Accountability Framework, described below.¹¹⁹

EPA’s 2016-2017 milestone and 2018 midpoint assessments of Delaware, Maryland, New York, and Pennsylvania noted that each state had failed to meet their goals for nitrogen, and that “Enhanced Oversight” was needed in each state for different aspects of their programs.¹²⁰ EPA identified actions each state could take to improve, but it did not apply its reasonable assurance policy and simply urged the states to address these failings in their Phase III WIPs.

Notably, in that evaluation, EPA recognized that Pennsylvania had missed statewide 2017 targets for all three pollutants and that loads for both nitrogen and phosphorus

113. *Id.* at 7-5.

114. *Id.* at 7-2.

115. *Id.* at 7-5.

116. *Id.* at 8-22 (wastewater), 8-24 (urban stormwater), 8-30 (agriculture).

117. 33 U.S.C. §1342.

118. See *Pennsylvania’s Blueprint for Clean Water*, *supra* note 78; see also BAY TMDL, *supra* note 5, §8 (discussing backstop actions taken by EPA during Phase I WIP evaluations against New York in §8.4.4, Pennsylvania in §8.4.5, and West Virginia in §8.4.7).

119. In reviewing this analysis, it is important to note which administration was in office during 2010-2015 and from 2016-2020.

120. U.S. EPA, *EPA Final Evaluation of 2016-2017 Milestone and Midpoint Progress and 2018-2019 Milestone Commitments in the Chesapeake Bay Watershed*, <https://www.epa.gov/chesapeake-bay-tmdl/epa-final-evaluation-2016-2017-milestone-and-midpoint-progress-and-2018-2019> (last updated July 11, 2023). What “Enhanced Oversight” actions EPA took and how effective they were is not known.

in the Susquehanna River, the largest Bay tributary, were *increasing*.¹²¹ The nitrogen target had been missed by more than 17 million pounds.

EPA claimed it was “maintaining backstop actions” against Pennsylvania for agricultural pollution and urban/suburban stormwater. What that meant is not clear, as EPA did not assert any of the identified accountability actions.¹²² Instead, the Agency expected the state to address these issues in its Phase III WIP. First, Pennsylvania was to identify a dedicated funding source to support increased agricultural BMP implementation. Second, it was to close the urban/suburban stormwater nutrient and sediment reduction gap. The Agency did not explain how. EPA did offer to help Pennsylvania in both regards by committing staff to assist the state in development and implementation of its Phase III WIP. Despite these directives, Pennsylvania did not meet either of the Agency’s expectations in its WIP.

Pennsylvania DEP submitted its first effort to craft a Phase III WIP in 2019.¹²³ It was obviously deficient, as DEP openly admitted it would only meet 73% of Pennsylvania’s nitrogen load and had a funding shortfall of more than \$275 million annually.¹²⁴ DEP openly recognized that a consequence of not filling these gaps could be the imposition of “backstop measures and consequences.”¹²⁵ The state submitted two subsequent drafts. Each was similarly deficient and rejected by EPA.¹²⁶ Yet, EPA did not use its backstop authorities as it committed to do in the Bay TMDL, nor has it considered revising the TMDL in 2012 or 2017 as it said it would.¹²⁷

1. EPA Has Not Consistently Used Its Accountability “Backstops”

EPA’s “Accountability Framework” is unique to the Bay TMDL, and is a separate role EPA claims to have assumed in response to Executive Order No. 13508.¹²⁸ Consistent with several letters EPA sent to the Bay jurisdictions prior to 2010, the framework provides that EPA will monitor TMDL progress and take one or more of the following “backstop actions” if a Bay jurisdiction fails to provide a facially sufficient WIP or meet its interim WIP goals on time:

- Expand NPDES permit coverage to unregulated sources: For example, using residual designation authority to increase the number of sources, operations or communities regulated under the NPDES permit program
- NPDES program agreements: Expanding EPA oversight review of draft permits . . . in the Bay watershed and objecting to inadequate permits that do not meet the requirements of the CWA (including NPDES effluent limits that are not consistent with the Chesapeake Bay TMDL WLAs)
- Require net improvement offsets: For new or increased loadings, requiring net improvement offsets that do more than merely replace the anticipated new or increased loadings
- Establish finer-scale WLAs and [load allocations (LAs)] in the Chesapeake Bay TMDL: Establishing more specific allocations in the final December 2010 Chesapeake Bay TMDL than those proposed by the jurisdictions in their Phase I WIPs
- Require additional reductions of loadings from point sources: Revising the final December 2010 Chesapeake Bay TMDL to reallocate additional load reductions from nonpoint to point sources of nitrogen, phosphorus, and sediment pollution, such as wastewater treatment plants
- Increase and target federal enforcement and compliance assurance in the watershed: That could include both air and water sources of nitrogen, phosphorus, and sediment
- Condition or redirect EPA grants: Conditioning or redirecting federal grants; incorporating criteria into future Requests for Proposals based on demonstrated progress in meeting WIPs or in an effort to yield higher nitrogen, phosphorus, or sediment load reductions
- Federal promulgation of local nutrient [water quality standards]: Initiating promulgation of federal standards where the jurisdiction’s [water quality standards] do not contain criteria that protect designated uses locally or downstream¹²⁹

The CWA, primarily §§303 and 402, authorizes each of the actions. Despite this congressional authority, since 2016, EPA has refused to assert those authorities regardless of the woeful performance of some states. As explained in the prior section, Pennsylvania has not submitted a Phase III WIP that provides reasonable assurance or complies

121. U.S. EPA, EPA EVALUATION OF PENNSYLVANIA’S 2016-2017 AND 2018-2019 MILESTONES (2018), <https://www.epa.gov/sites/default/files/2018-07/documents/final-evaluation-pa-2016-2017-and-2018-2019-milestones.pdf>.

122. Bay TMDL, *supra* note 5, at 7-12. Described in the following subsection.

123. PENNSYLVANIA DEP, *supra* note 82.

124. *Id.* at 4.

125. *Id.* at 112.

126. Pennsylvania submitted a third “Amended Phase III WIP” in July 2022. EPA rejected that amendment in November 2022. U.S. EPA, *EPA Evaluation of Pennsylvania’s Amended Phase III WIP*, <https://www.epa.gov/chesapeake-bay-tmdl/epa-evaluation-pennsylvanias-amended-phase-iii-wip> (last updated Nov. 14, 2023). Pennsylvania still does not have a valid Phase III WIP. Without a fully compliant WIP, Pennsylvania will never meet its Bay TMDL obligations.

127. Bay TMDL, *supra* note 5, §10.3.

128. *Id.* §7.2; Exec. Order No. 13508, Chesapeake Bay Protection and Restoration, 75 Fed. Reg. 26226 (May 11, 2010).

129. Bay TMDL, *supra* note 5, §7.2.

with the CWA. At this point, one would expect the Agency to utilize its backstop authorities. It has not.

In 2020, frustrated with Pennsylvania's recalcitrance and EPA's failure to act, CBF and its partners, including D.C., Delaware, Maryland, Virginia, a county, farmers, and watermen, sued EPA to require it to utilize its CWA backstop authorities to compel Pennsylvania to write an acceptable WIP.¹³⁰ The lawsuit asserted that EPA had agreed in the Bay TMDL to use its CWA authorities against recalcitrant states and its failure to do so would delay Bay restoration.

The co-plaintiffs asked EPA to utilize those authorities against Pennsylvania as they feared that the Bay Partnership and TMDL would unravel if EPA did not act. Underterred, the Agency clung to its assertion that each of those statutory authorities simply gives EPA the discretion to act. None of them were mandatory duties; thus, no settlement could require EPA to act no matter how flagrantly a state had violated the TMDL requirements.¹³¹

While the parties entered into a settlement agreement where EPA agreed to *consider* using its backstop authority, the agreement reserves EPA's discretion.¹³² For example, EPA has agreed to inspect Pennsylvania farms to determine if they cause harm to downstream water quality. However, even if EPA finds that a farm is contributing to a downstream impairment, the Agency is not obligated to require that the farm obtain a point source permit or install a specific BMP.¹³³

That same discretionary language equally applies to point source permit violations; even if EPA finds an obvious CWA permit violation, it has no obligation to take an enforcement action against the polluter.¹³⁴ Moreover, EPA did not identify a specific number of inspections or actions it would take for any backstop action. To date, EPA has not identified any farm as contributing to a water quality impairment or exercised its residual designation authority (RDA) against any municipality in Pennsylvania.¹³⁵

Based upon EPA's current approach to Bay TMDL enforcement, it is obvious that EPA does not intend to broadly assert its backstop authorities against the states or polluters. It simply intends to scare the states and these pollution sectors into compliance on the off chance that they will be the target of EPA's discretion.¹³⁶ Such random tactics will not ensure compliance with TMDL goals by 2025 or any future deadline.

VI. Why Has EPA Failed to Act?

EPA has emphasized on several occasions that it has legal backstop authorities it could use to further Bay restoration, yet it has failed to use them effectively.¹³⁷ Why EPA has not used them to ensure Bay restoration is unclear. The Agency claims that it alone has the discretion to decide when to utilize the backstops and which ones to use.¹³⁸ It is one thing to rely on deference as a principle to pick your battles and conserve resources,¹³⁹ but it is quite another to continue fiddling as Rome burns.

At some point, reliance on deference becomes an arbitrary decision subject to legal challenge. Are we there now, considering the findings in the CESR report?¹⁴⁰ Will EPA suddenly spring into action in 2025, or will it wait until the final nail is driven when it completes its TMDL postmortem in 2026? What if EPA does nothing, can the states act? Maryland and Virginia could, for example, sue Pennsylvania for impairing the Bay, but such an action goes straight to the Supreme Court.¹⁴¹ Given the Court's current composition, any outcome perceived to impair states' rights is a dead letter.¹⁴²

If EPA refuses to constructively direct recalcitrant states, then the TMDL is of little utility, as citizens cannot enforce its terms and a state legal challenge would be a roll of the dice.¹⁴³ Ultimately, EPA needs to be clear in its intentions or the Bay Partnership is sure to collapse.

Mid-Centre County Authority, https://echo.epa.gov/enforcement-case-report?activity_id=3603741371 (last visited Apr. 15, 2024).

130. Chesapeake Bay Found. v. Environmental Prot. Agency, No. 1:20-cv-2529 (CJN) (D.D.C. Nov. 20, 2020).

131. EPA and DOJ took the same approach when CBF and several signatories of the pre-2014 Chesapeake Bay Agreements sued EPA in 2009. Fowler v. Environmental Prot. Agency, No. 1:09-CV-00005-CKK (D.D.C. Jan. 5, 2009).

132. Settlement Agreement, Chesapeake Bay Found. v. Environmental Prot. Agency, Civ. No. 1:20-cv-2529 (D.D.C. July 10, 2023), https://www.epa.gov/system/files/documents/2023-09/FINAL_ChesapeakeBay_Signed_SettlementAgreement.pdf.

133. *Id.* Section III, ¶ 4.

134. *Id.* ¶ 3.

135. U.S. EPA, *EPA Activities Pursuant to 2023 Settlement Agreement*, <https://www.epa.gov/chesapeake-bay-tmdl/epa-activities-pursuant-2023-settlement-agreement> (last updated Mar. 6, 2024). In 2023, EPA issued notices of noncompliance to six municipalities for MS4 violations and entered two administrative consent orders—one with a municipality and another with a wastewater treatment facility. U.S. EPA, SUMMARY OF COMPLIANCE ASSURANCE ACTIVITIES (2024), <https://www.epa.gov/system/files/documents/2024-03/summary-of-activities-jan-june-2023.pdf>. EPA did not assess a penalty in either consent order. See EPA Enforcement and Compliance History Online, *Civil Enforcement Case Report—03-2023-0028: North Middleton Twp.*, https://echo.epa.gov/enforcement-case-report?activity_id=3603522176 (last visited Apr. 15, 2024); EPA Enforcement and Compliance History Online, *Civil Enforcement Case Report—03-2023-0113:*

136. EPA states as much on its Bay TMDL website: "EPA is prepared to use its discretion to take federal actions, if it is appropriate to do so, to help the jurisdictions achieve their pollutant reduction targets. Federal actions can be taken at any time." U.S. EPA, *EPA Oversight of Watershed Implementation Plans (WIPs) and Milestones in the Chesapeake Bay Watershed* (emphasis added), <https://www.epa.gov/chesapeake-bay-tmdl/epa-oversight-watershed-implementation-plans-wips-and-milestones-chesapeake-bay> (last updated Nov. 14, 2023).

137. BAY TMDL, *supra* note 5, at ES-13 ("If progress is insufficient, EPA will utilize contingencies to place additional controls on federally permitted sources of pollution, such as wastewater treatment plants, large animal agriculture operations and municipal stormwater systems, as well as target compliance and enforcement activities."); see also *id.* § 7.

138. The decision to use federal authorities "will be guided by common sense, the best available information, and a shared goal to restore the Chesapeake Bay." U.S. EPA, *Frequent Questions About the Chesapeake Bay TMDL*, <https://www.epa.gov/chesapeake-bay-tmdl/frequent-questions-about-chesapeake-bay-tmdl> (last updated Mar. 14, 2024) (How will EPA decide if federal actions are necessary?).

139. See *Sierra Club v. Whitman*, 268 F.3d 899, 32 ELR 20214 (9th Cir. 2001) (prosecutorial discretion upheld).

140. See *supra* note 9 and accompanying text.

141. U.S. CONST. art. III, § 2, cl. 1.

142. See *Sackett v. Environmental Prot. Agency*, 143 S. Ct. 1322, 1345, 53 ELR 20083 (2023) ("States enjoy primary sovereignty over their waters").

143. See 33 U.S.C. § 1313(d).

Some partners have already expressed hesitation at signing another Bay Agreement.

An explanation for EPA and, to a degree, state inaction is the perceived political fallout anticipated if EPA should exercise any of its backstop authorities. This is especially true if EPA or a state requires the agricultural industry in the Bay watershed to restrict pollution discharges. Here, Pennsylvania plays a pivotal role. With 19 electoral votes, it is a key to the presidential election and control of the U.S. Senate.¹⁴⁴ However, it is a questionable political calculus whether water quality and Bay-dependent economies in downstream jurisdictions (D.C., Delaware, Maryland, and Virginia) should suffer for political expediency.

VII. Recommendations for Achieving Bay Restoration

Despite multiple Bay Agreements, state pollution-reduction plans and strategies, CWA amendments, and the expenditure of millions of dollars, the Bay is still impaired. A critical examination of why this is true has led the Chesapeake Bay Program to conclude that despite tremendous gains in reducing pollution from wastewater treatment plants, we have not and cannot adequately address pollution from farms and urban development without changes to “policies and programs.”¹⁴⁵ Reliance on voluntary actions by farmers to reduce pollution will not suffice regardless of the amount of money and technical assistance available. Moreover, polluted runoff from development is outpacing gains from land conservation and tree planting.¹⁴⁶

These findings would be revelatory if EPA had not said them before. Four decades ago, EPA issued *Chesapeake Bay: A Framework for Action*, a management report that recommended actions the Bay jurisdictions should take to stem pollution to the Bay.¹⁴⁷ Like the CESR report, it concluded that agriculture and urban/suburban stormwater were the primary causes of the Bay’s demise, and recommended that EPA develop a “detailed nonpoint source control implementation program as part of a basin-wide water quality management plan.”¹⁴⁸

Regrettably, EPA and the Bay partners did not heed this advice, and have relied on voluntary measures for four decades. Proceeding on a similar course will not lead to Bay restoration.¹⁴⁹ The Bay jurisdictions must implement new methods for reducing Bay pollutants, especially from nonpoint sources. Three recommendations are given below.

A. Use the “Backstops”

The Bay TMDL identifies eight backstop actions EPA could use.¹⁵⁰ Three of them are most likely to yield noteworthy pollution reductions and are considered in the following subsections.

1. Expand NPDES Permit Coverage to Unregulated Sources

The CWA grants EPA RDA to expand point source permit coverage to sources not currently required to have NPDES permits.¹⁵¹ One form of RDA applies to certain types of impervious coverage, such as municipal, industrial, and institutional areas, as well as construction sites. The other form allows EPA to identify unpermitted animal feeding operations (AFOs) as CAFOs that require point source NPDES permits. Requiring NPDES permits with strict discharge limits would reduce the amount of pollution flowing to the Bay.

□ *Expand coverage of stormwater general permits.* Section 402 of the CWA requires that all point sources discharging pollutants have permits.¹⁵² Subsection (p)(1) grants exceptions to this requirement for sources made entirely of stormwater.¹⁵³ However, those exceptions do not apply to a discharge that the Administrator or the state determines contributes to a violation of a water quality standard or is a significantly contributing a pollutant to waters of the United States.¹⁵⁴ If a state or EPA makes such a determination, the source can be required to obtain a discharge permit with pollution discharge limits.¹⁵⁵

There are four additional categories of discharges that may be “residually” designated:

1. The discharge is from a small MS4 required to be regulated
2. The discharge is associated with a small construction activity
3. Stormwater discharges that the permitting authority determines require controls based on WLAs that are part of a TMDL
4. Stormwater discharges determined by the permitting agency to be causing or contributing to a violation of water quality standards or to be a significant contributor of pollutants¹⁵⁶

144. John L. Dorman, *Trump vs Biden Will Be Decided by These 7 States in 2024*, BUS. INSIDER (Apr. 8, 2024), <https://www.businessinsider.com/battleground-states-2024-presidential-election-road-white-house-2022-12>; Elizabeth Estrada, *How Spotlight PA Will Cover Pennsylvania’s 2024 Election*, SPOTLIGHT PA (Jan. 30, 2024), <https://www.spotlightpa.org/news/2024/01/pennsylvania-2024-election-coverage-president-senate-row-offices-pan/>.

145. CESR, *supra* note 9, at v-vi.

146. *Id.*

147. FRAMEWORK FOR ACTION, *supra* note 2, at 11.

148. *Id.* at 23.

149. See CESR, *supra* note 9.

150. See *supra* note 129 and accompanying text.

151. 33 U.S.C. §1342(p).

152. *Id.* §1342.

153. See 40 C.F.R. §122.26(a)(1).

154. 33 U.S.C. §1342(p)(2)(E).

155. 40 C.F.R. §122.26(a)(1)(v). Any person may petition to require an NPDES permit for a discharge composed entirely of stormwater that contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States. *Id.* §122.26(f)(2).

156. *Id.* §122.26(a)(9)(i)(A)-(D).

These statutory and regulatory provisions have been used on several occasions to require, for example, smaller municipal, industrial, or institutional facilities to control stormwater such that it does not contribute to violations of water quality standards.¹⁵⁷ Thus, citizens can petition EPA, asking it to exercise this authority in the Bay watershed.¹⁵⁸ Prior successful petitions can provide a road map for citizen advocacy.¹⁵⁹ Such a petition can be premised upon the watershed assessment data provided in a state's §303(d) biannual report and data generated by the Chesapeake Bay Program, including the CESR report.¹⁶⁰ If EPA fails to respond to a citizen's petition or denies it, a suit can be filed challenging EPA's decision as arbitrary and capricious.¹⁶¹ Of course, EPA could decide to exercise this authority without the need for a petition or litigation requiring action.

□ *Designate AFOs as CAFOs requiring NPDES permits.* In 2010, to make up for shortfalls in Pennsylvania's Phase I WIP, EPA considered shifting "a greater portion of Pennsylvania's AFOs load" from a nonpoint source load to a point source load.¹⁶² In doing so, "EPA would assume full implementation of practices required under a CAFO permit . . ." ¹⁶³ Thus, AFOs could be subject to CWA point source permits to protect water quality. Such permits would only be issued upon designation by Pennsylvania DEP.¹⁶⁴

Section 402(p) allows EPA and/or a state to identify small farms discharging pollutant-laden stormwater that causes or contributes to a water quality impairment and to require that they obtain a discharge permit.¹⁶⁵ Federal regulations allow the Regional Administrator, the state, or both to designate small livestock farms as requiring a CAFO permit.¹⁶⁶ Such a permit would require BMPs that stop or reduce discharges to local waters and would be enforceable by the state, EPA, or citizens.¹⁶⁷

To make such a designation, EPA or the state must first determine that the farm is a "significant contributor of pollution to waters of the United States." That is, the Regional Administrator or the state must find that one or more pollutants in the AFO's discharge contribute to an impairment in a downstream water impaired for that pollutant.¹⁶⁸ In making this determination, the government agency must consider several factors, including the size of the AFO and the amount of waste reaching surface water.¹⁶⁹

Further, before such a designation can be made, the state or EPA must have conducted an on-site inspection of the farm and determined that it could be regulated under the CAFO program.¹⁷⁰ No AFO with numbers of animals below those for medium CAFO designation may be designated unless the pollutants are discharged through a man-made ditch or other similar device; or pollutants are discharged directly into water that passes through the facility or otherwise comes into direct contact with confined animals.¹⁷¹

Designating AFOs as CAFOs would require NPDES permitting over smaller farms, which, in Pennsylvania, are the bulk of the pollution problem.¹⁷² Citizens and downstream states could petition EPA to take such action with respect to specific farms that are harming water quality. A state's Integrated Water Quality Report identifying agriculture as the source of an impairment could support such a petition.¹⁷³ If EPA inappropriately rejected the petition, citizens could take legal action.¹⁷⁴

2. Expand EPA Point Source Permit Review

EPA has oversight and veto authority over pollution discharge permit terms and the issuance of permits in each Bay jurisdiction.¹⁷⁵ Currently, EPA only exercises this authority over "significant" pollution dischargers. Significance is dependent upon the size of the discharge and varies from state to state.¹⁷⁶ Unfortunately, many point sources in the Bay region are not of sufficient sizes to be considered

157. U.S. EPA, *February 2024 Update: Residual Designation Authority (RDA) Activities Underway for the Charles, Neponset, and Mystic River Watersheds*, <https://www.epa.gov/npdes-permits/february-2024-update-residual-designation-authority-rda-activities-underway-charles> (last updated Mar. 6, 2024). The state and EPA made these designations due to petitions from the Conservation Law Foundation. In 2015, the Natural Resources Defense Council (NRDC), Bluewater Baltimore, and others petitioned EPA Region III to exercise such authority in the Back River, Maryland, watershed. EPA denied the petition, and NRDC filed suit in 2017. The federal court determined that EPA had acted arbitrarily and capriciously in its denial of the petition. *Blue Water Balt. v. Wheeler*, Civ. Action No. GLR-17-1253 (D. Md. Mar. 22, 2019). The court remanded the decision to the Agency. To date, EPA has not responded.

158. 40 C.F.R. §122.26(a)(9)(i)(D), (f)(5).

159. See U.S. EPA, *EPA Region I—Petition Review & Stakeholder Engagement Process FAQs: Charles River (Massachusetts) Residual Designation Petition*, <https://www.epa.gov/charlesriver/epa-region-1-petition-review-stakeholder-engagement-process-faqs> (last updated Dec. 15, 2023).

160. See U.S. EPA, *Overview of Listing Impaired Waters Under CWA Section 303(d)*, <https://www.epa.gov/tmdl/overview-listing-impaired-waters-under-cwa-section-303d> (last updated Aug. 11, 2023); CESR, *supra* note 9.

161. 5 U.S.C. §§553, 706(2)(A).

162. Bay TMDL, *supra* note 5, at 8-26.

163. *Id.*

164. *Id.*

165. 33 U.S.C. §1342(p).

166. 40 C.F.R. §122.23(c)(1)(i).

167. *Id.* §122.42(e)(1).

168. *Id.* §122.23(c)(1)(i).

169. *Id.* §122.23(c)(2).

170. *Id.* §122.23(c)(3).

171. *Id.*

172. There are 33,000 farms in Pennsylvania's portion of the Bay watershed. Fewer than 400 of those farms are considered CAFOs requiring a discharge permit. PENNSYLVANIA DEP, PENNSYLVANIA PHASE 3 CHESAPEAKE BAY WATERSHED IMPLEMENTATION PLAN 17 (2019, amended December 2021).

173. Pennsylvania completed its last Integrated Water Quality Report in 2022. PENNSYLVANIA DEP, 2022 PENNSYLVANIA INTEGRATED WATER QUALITY REPORT, <https://storymaps.arcgis.com/stories/b9746ecc807f48d99dec-d3a583eede12>. A 2024 draft report is publicly available. PENNSYLVANIA DEP, 2024 PENNSYLVANIA INTEGRATED WATER QUALITY REPORT, <https://storymaps.arcgis.com/stories/7af67824d6924b88b544dbad302ebc4f>. The report designates hundreds of stream/river miles as impaired due to agriculture.

174. 5 U.S.C. §§553, 706(2)(A).

175. 33 U.S.C. §1342(d).

176. Bay TMDL, *supra* note 5, §4.4.1 tbl.4-4 (significant municipal wastewater facility design flows greater than 0.1 to 0.5 million gallons per day depending upon location). Restricting the discharge from these facilities will provide limited pollution reduction due to their size. But every pound of reduction matters.

“significant.” Moreover, EPA often waives permit review for categories of sources.¹⁷⁷ Thus, not all point sources in the Bay watershed have strict limits on nutrients and suspended solids. Many dischargers operate under general permits, which routinely have lax permit limits even though they discharge to impaired bodies of water.¹⁷⁸

Citizens could petition EPA to expand its oversight authority to cover “non-significant” dischargers and revoke its waiver over other permits. If granted, EPA’s oversight of draft permits would expand and allow it to reject or require modification of permits that do not sufficiently reduce pollution. Such oversight could also apply to the issuance of state general NPDES permits. Citizens could also object to general permit issuance to specific sources and request that the permitting authority issue an individual permit with numeric pollution limits. Individual permits are subject to source-specific limits, monitoring, and enforcement. Thus, pollution reductions are “reasonably assured.”

3. Develop Finer-Scale WLAs for Point Sources and LAs for Nonpoint Sources

The Bay TMDL is broken down into 92 river basin segments, each with its own WLA and LA pollutant allocations.¹⁷⁹ However, the LAs are for generic nonpoint pollution sources such as “agriculture,” “onsite,” and “urban.” Thus, resource managers and landowners do not apply BMPs specific to an identified pollution source within a subwatershed—for example, those specific to crop fields versus parking lots. Also, there are several types of agricultural nonpoint source discharges such as cropland, poultry houses, and livestock production. If EPA amends LAs to identify a specific discharge, BMPs could be more targeted.

Moreover, there are several subbasin allocations for the Potomac and James Rivers, for example, but there is only one set of allocations for the entire Susquehanna River basin, no subbasins.¹⁸⁰ Thus, the load limits for point sources on the Juniata River or any other of the numerous creeks that feed the Susquehanna along its more than 400-mile length are not set based upon impacts to the Bay, but on local water quality. Nutrients like nitrogen and phosphorus oftentimes do not have a local impact. Thus, these sources are often not adequately controlled.

Establishing subbasins on the Susquehanna with identified WLAs and LAs over specific pollution sources would generate more focused BMP application and better permit terms for sources discharging to smaller subbasins. Creating such finer-scale allocations would apply TMDL limits to smaller pollution sources and to smaller watersheds, thereby reducing the overall load from the Susquehanna River.

As noted above, during the Phase I WIP process, EPA transferred nonpoint source pollution LAs to point sources or required nonpoint sources to obtain NPDES permits. EPA could take similar measures today. Farms and municipalities are not meeting their Bay TMDL LAs. Hence, EPA could assign those allocations to a point source subject to a numeric pollutant discharge limit or require the farm or municipality to obtain a point source permit subject to numeric limits. Those sources would have to meet specific discharge limits or be subject to fines and injunctive relief via enforcement efforts by the permitting authority or citizens.¹⁸¹

B. *Comprehensively Address Nonpoint Source Pollution*

Two nonpoint source sectors are the predominant sources of Bay pollution: agriculture and urban/suburban stormwater.¹⁸² Since the inception of the CWA in 1972, legal tools have been available to EPA and the states to address these sources. Regrettably, they have been underutilized.

If the Bay is to be restored, the Bay Partnership must incorporate the CESR report recommendations with those made by the Chesapeake Bay Program in 1983 to comprehensively address nonpoint source pollution. Those recommendations are to (1) create nonpoint source management plans that do not rely on voluntary programs in priority subbasins focused on the two primary pollution sources; (2) provide incentives for installing the most productive BMPs; and (3) address nutrient mass imbalances created by concentrated animal production.

1. Create Basinwide Nonpoint Source Management Plans Focused on Pollution From Agriculture and Urban/Suburban Stormwater

In 1983, recognizing that agriculture and urban development were the largest sources of pollution to the Bay, the Chesapeake Bay Program recommended that EPA and the Bay jurisdictions “utilize the existing water quality management process to develop a “detailed nonpoint source control implementation program . . . as part of [a] proposed basin-wide water quality management plan,” and that “[the U.S. Department of Agriculture (USDA)] and the EPA . . .

177. 33 U.S.C. §1342(e). For example, EPA has waived review for all small MS4s in Pennsylvania. *See, e.g.*, 54 Pa. Bull. 23-27 (Jan. 6, 2024), <https://www.pacodeandbulletin.gov/secure/pabulletin/data/vol54/54-1/54-1.pdf>.

178. *See, e.g.*, Maryland’s General Permit for Industrial Stormwater Discharges, Discharge Permit No. 20-SW, <https://mde.maryland.gov/programs/permits/WaterManagementPermits/Documents/GDP%20Stormwater/20SW/20SW-Final-Permit.pdf>. Although the permit has been remanded to the Maryland Department of the Environment to reconsider environmental justice issues, the permit limits are likely to remain the same. For nutrients like nitrogen and phosphorus, the permit requires the permittee to “implement restoration of 20% of the untreated impervious surface area at your facility.” *Id.* §III.A.1.a. A numeric limit with mandatory sampling would be far more effective at reducing pollution.

179. Bay TMDL, *supra* note 5, at ES-4.

180. *Id.*

181. 33 U.S.C. §§1319, 1365.

182. CESR, *supra* note 9, at v.

should strengthen and coordinate their efforts to reduce agricultural nonpoint source pollution.”¹⁸³ It is not clear what the Chesapeake Bay Program meant by the “water quality management process.” This is likely a reference to CWA §208 (areawide waste treatment management), §319 (nonpoint source management programs), and the §303 TMDL program.¹⁸⁴

□ *CWA §208—Areawide waste treatment management.* Section 208 of the CWA requires the governor of each state to identify areas with “substantial water quality control problems” caused by “urban-industrial concentrations or other factors.”¹⁸⁵ Upon identification, the governor must designate the boundaries of the area and a representative to develop “effective areawide waste treatment management plans for such area.”¹⁸⁶ If the area covers two or more states, the governors of those states shall work together to designate the boundaries and representatives.

Plans containing alternatives for managing and treating the problematic waste are to be prepared within one year of an area being so designated. Those plans must include, among other things,

a process to (i) identify . . . agriculturally . . . related nonpoint sources of pollution, including return flows from irrigated agriculture, and their cumulative effects, runoff from manure disposal areas, and from land used for livestock and crop production, and (ii) set forth procedures and methods (*including land use requirements*) to control to the extent feasible such sources.¹⁸⁷

No NPDES permit may conflict with an approved areawide waste management plan.¹⁸⁸ The section also requires that various agencies of the federal government provide technical assistance to the states in developing such plans, and that USDA may provide agricultural cost-sharing grants to assist in plan implementation.¹⁸⁹

Although some states have developed individual plans, some lump them in with their §303(d) reporting.¹⁹⁰ Specific §208 plans have not been identified for Maryland, Virginia, or Pennsylvania.

□ *CWA §319—Nonpoint source management program.* Congress amended the CWA in 1987 to add a nonpoint source pollution management provision, §319, to address

water quality problems not managed by §402.¹⁹¹ The section sets a national policy that programs for controlling nonpoint sources of pollution be “developed and implemented in an expeditious manner so as to enable the goals of this chapter to be met through the control of both point *and* nonpoint sources of pollution.”¹⁹²

The section requires states to develop and submit nonpoint source management plans to EPA.¹⁹³ Maryland and Virginia have submitted §319 plans as part of their respective continuing planning processes.¹⁹⁴ Those plans, however, simply repeat what they are already doing pursuant to the Bay TMDL and their respective implementation plans.

Despite the Chesapeake Bay Program’s 1983 recommendation, the Bay Partnership did not develop a comprehensive basinwide plan focused specifically on addressing agricultural and urban/suburban nonpoint source pollution. The Bay Partnership should remedy this immediately.

The Bay jurisdictions should collectively develop areawide waste treatment and nonpoint source management plans, as provided for in §§208 and 319, identifying specific actions they will all take to reduce agricultural and urban/suburban stormwater pollution. For example, they could agree that they will each require farms to fence all livestock out of Bay tributaries by a set date and either pass legislation or promulgate regulations effectuating that agreement. These states took similar steps in the 1980s. They can do it again.

2. Provide Incentives for Reducing Agricultural Nonpoint Source Pollution

Chesapeake Bay advocates, policymakers, and bureaucrats have accepted the notion that “farmers want to do the right things to improve water quality, but they don’t have the expertise or funds to do them.” Adherence to this narrative suggests that if we simply find more money and technical help, the rate of BMP installation will increase. However, as explained above, increased funding and technical outreach have not spurred agricultural BMP installation of the type or at the rate necessary to restore the Bay.¹⁹⁵

In writing the management plans discussed above, the Bay jurisdictions and EPA should follow the Chesapeake Bay Program technical staff recommendations found in the CESR report. They identified aspects of agricultural pollution control that the Bay TMDL and WIPs do not adequately address. Specifically, programs that rely on

183. FRAMEWORK FOR ACTION, *supra* note 2, at ES-23, 100-02 (Bay-Wide Nutrient Recommendations 1, 7, and 8).

184. 33 U.S.C. §§1288, 1313, 1329. See discussion in the following subsections.

185. 33 U.S.C. §1288. Section 208 creates a comprehensive scheme for eliminating water pollution in both urban-industrial areas and agricultural areas. *Natural Res. Def. Council, Inc. v. Costle*, 564 F.2d 573, 7 ELR 20702 (D.C. Cir. 1977).

186. 33 U.S.C. §1288(a)(2).

187. *Id.* §1288(b)(2)(F) (emphasis added).

188. *Id.* §1288(e).

189. *Id.* §1288(g), (h), (j).

190. See, e.g., Ohio EPA, *Water Quality Management Plans (CWA Sections 208 and 303)*, <https://epa.ohio.gov/divisions-and-offices/surface-water/reports-data/water-quality-management-plans-cwa-sections-208-and-303/> (last visited Apr. 15, 2024).

191. 33 U.S.C. §1329. See EDWARD B. WITTE, *THE CLEAN WATER ACT HANDBOOK* 233-34 (Mark A. Ryan ed., 4th ed. 2018).

192. 33 U.S.C. §1251(a)(7) (emphasis added).

193. *Id.* §1329.

194. MARYLAND DEPARTMENT OF THE ENVIRONMENT, *MARYLAND’S 2021-2025 NONPOINT SOURCE MANAGEMENT PLAN* (rev. 2024), https://mde.maryland.gov/programs/water/319NonPointSource/Documents/NPS_Management_Plan/Maryland_NPS_Plan_2021-25_Final_01042023.pdf; VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY, *VIRGINIA NONPOINT SOURCE POLLUTION MANAGEMENT PROGRAM PLAN 2019 UPDATE* (2020), <https://www.deq.virginia.gov/home/showpublisheddocument/4334/637462334964400000>.

195. See *supra* Section IV.A.

farmers to voluntarily install BMPs “do not provide sufficient incentives for adoption of practices with the largest pollutant reduction potential.”¹⁹⁶ That is, a program that lets the farmer choose which BMP to install does not insure the most efficient BMP and best outcome for that body of water.

The report recommends “new financial incentive programs such as pay-for-performance or pay-for-success programs.”¹⁹⁷ In this way, land managers are rewarded for quantifiable pollution reductions or for reaching benchmarks linked to pollution reduction (e.g., soil nutrient levels). One such financial incentive would be to offer farmers tax breaks for taking land out of production, especially when that decision is coupled with the installation of BMPs that protect local water quality. Such incentives could be achieved through the amendment of state and federal tax laws.

This is not a new idea. The Chesapeake Bay Program recommended it in 1983.¹⁹⁸ But here we are 40+ years later, and neither the Bay jurisdictions, the Chesapeake Bay Commission, nor the federal government are seriously discussing such incentives.

Creating a tax incentive should not be difficult, as evident by the numerous tax incentives already granted to agriculture.¹⁹⁹ One method would be to allow a reduction in the amount of taxes a farm must pay based upon the amount of land that is verified by an independent party to have been taken out of production during that tax year.

3. Address the Nutrient Mass Imbalance Created by Concentrated Animal Production

The CESR report highlights that the importation of nutrients to areas of highly concentrated animal agriculture, predominantly poultry production, has created an insurmountable mass imbalance.²⁰⁰ That is, agricultural sources import nutrients in the form of fertilizer for crops and feed into an area with a high concentration of livestock. However, the farm does not export the resultant nutrient-laden manure from the area, which, along with excess fertilizer, runs off, harming local waters.

Concentrated animal and crop producers in the Lower Susquehanna River basin and the Delmarva Peninsula, for example, must address that imbalance.²⁰¹ The basinwide nonpoint source plan discussed above should address this

problem. One means of doing so is to make the livestock integrator responsible for proper fertilizer application and for removal of manure generated by the contract grower from the watershed. States can require this as part of a farm’s CAFO permit and its nutrient management plan.²⁰²

For the Bay Partnership to adopt any of these recommendations, determined leadership is necessary. If EPA is reluctant to use its CWA authorities to address these issues due to fear of political backlash, the partnership must identify another authority relatively immune to such fallout and grant it requisite powers.

C. Draft the Next Chesapeake Bay Agreement as an Interstate Compact

In 1983, the Chesapeake Bay Program recommended the creation of a Chesapeake Bay Management Authority that would manage the Bay as a single national resource. Congress would establish the authority, which would permit voting by federal, state, private, and public interest groups. The Chesapeake Bay Program acknowledged that to create such an authority would require federal legislation or an interstate compact.²⁰³ Arguably, the Chesapeake Bay Commission became that “authority” and CWA §117 was the referred-to federal legislation. However, those two actions have been ineffectual.

First, the Commission has done little to move the needle on nonpoint source pollution reduction. In 2015, it issued a policy statement, *Healthy Livestock, Healthy Streams: Policy Actions to Promote Livestock Stream Exclusion*.²⁰⁴ There, the Commission recommended a livestock exclusion policy promoting BMPs related to keeping cattle and other livestock out of streams and thereby decreasing bacterial, nutrient, and sediment pollution. These are necessary actions and should be mandatory Baywide, but that policy statement has not led to any change in how the Bay jurisdictions address the need for fencing or increased forest buffer installation.²⁰⁵

In 2017, the Commission issued *Boots on the Ground, Improving Technical Assistance for Farmers*, another policy statement advocating that state and federal authorities dedicate funds to help advise farmers on how they can reduce pollution from their operations.²⁰⁶ Like the fencing report, it provided background information, advocated for increased funding, and promoted expanding the number of conser-

196. CESR, *supra* note 9, at ii.

197. *Id.* at iii.

198. FRAMEWORK FOR ACTION, *supra* note 2, at 24, 102-03 (Management Recommendation 9).

199. IRS Pub. 225, Farmer’s Tax Guide (2023), <https://www.irs.gov/publications/p225> (last updated Mar. 25, 2024).

200. CESR, *supra* note 9, at 36-37.

201. *Id.* at v-viii, 36-37, 85. The CESR report states: “Appreciable reductions in nutrient loads cannot be achieved unless regional mass imbalances are successfully addressed.” *Id.* at 37. The report notes that poultry production in those two regions has increased 64% and 66%, respectively, from 2002 to 2017. *Id.* at 36. Moreover, livestock production in the Bay watershed produces 10 times more untreated animal waste than humans in the region. *Id.*

202. 40 C.F.R. §§122.23, 122.42(e). The integrator would become a co-permittee with the farm operator.

203. FRAMEWORK FOR ACTION, *supra* note 2, at 228.

204. CHESAPEAKE BAY COMMISSION, *supra* note 77.

205. Virginia was on the cusp of requiring the exclusion of cattle on all farms by 2026, but has kicked the can down the road to 2028. Charlie Paullin, *Deal Reached Over Extension for Va. Farmers to Adopt Pollution Reduction Practices*, VA. MERCURY (Feb. 16, 2023), <https://viriniamercury.com/2023/02/16/deal-reached-over-extension-for-va-farmers-to-adopt-pollution-reduction-practices/>.

206. CHESAPEAKE BAY COMMISSION, *BOOTS ON THE GROUND: IMPROVING TECHNICAL ASSISTANCE FOR FARMERS* (2017), <https://www.chesbay.us/library/public/documents/Policy-Reports/CBC-TA-Report-Boots-on-the-Ground.pdf>.

vation service professionals, but it did not advocate for any mandatory actions. Again, reasonable recommendations, but the Commission did not press for legislative or regulatory actions designed to meet Bay TMDL nonpoint source load obligations.²⁰⁷

Moreover, the Commission has limited authority. Each member state created legislation directing their respective representatives to “assist . . . in evaluating and responding to mutual Bay concerns,” promote cooperation, and recommend improvements.²⁰⁸ There is no authority to require regional legislation to reduce pollution consistent with the Bay Agreements or to impose sanctions upon noncompliant partners. Nor is there any authority to elevate intractable matters to the federal government for resolution.

Second, as noted above, Congress has already issued legislation specific to the Bay.²⁰⁹ However, EPA claims that the statute does not require it to act beyond creating a Bay TMDL and ensuring that NPDES permits meet their respective WLAs and are enforced. Decisions concerning the assertion of backstops are merely discretionary. Because two rounds of litigation have been unable to dislodge the Agency from this view,²¹⁰ Congress’ Bay restoration legislation did not go far enough.²¹¹

So, while there is an “authority” and federal legislation specifically directed at restoring the Bay, they have not proven able to complete the task. The Bay Partnership needs a more specific and rigorous mechanism. The Bay Agreements could have been that vehicle; however, the signatories view the agreements as voluntary instruments that are not judicially enforceable.²¹² Thus, a new mechanism must be advanced that requires action and minimizes adverse political ramifications. A new Bay Agreement signed as an interstate compact could resolve the impasse.²¹³

Two such compacts already exist in the Bay region: the Delaware River Basin Compact (DRBC) and the Susquehanna River Basin Compact (SRBC).²¹⁴ The DRBC confers specific regulatory powers upon the commission administering the compact, including pollution control and enforcement.²¹⁵ The SRBC grants similar powers to the Susquehanna River Commission. While Congress ratified both compacts, not all compacts must be congressionally approved.²¹⁶

Securing congressional approval for a Bay compact would be difficult, but if several Bay jurisdictions and EPA would support it, they may be able to convince Congress that it is necessary for the health and economic security of their citizens. Moreover, the compact could transfer critical decisionmaking to the existing Chesapeake Bay Commission, which would make political risk more diffuse and avoid agency discretion.²¹⁷

VIII. Conclusion

Forty years ago, EPA wrote *Chesapeake Bay: A Framework for Action* identifying the two primary sources of pollution to the Chesapeake Bay—agriculture and urban/suburban runoff—and proposed a plan for addressing them. Federal legislation and five multi-jurisdictional agreements sought to restore the estuary over that period, but none followed the advice given in 1983. All have failed to restore the Bay.

The preeminent Bay scientific authority has concluded that simply doing the same thing over and over will yield the same result. The Bay jurisdictions and federal authorities must advance new, mandatory actions under a more rigorous construct lest we lose our sanity and the Bay.²¹⁸

207. See CESR, *supra* note 9, at vi-vii. The Commission has not advocated for reductions in urban/suburban stormwater.

208. Chesapeake Bay Commission, *Mission*, <https://www.chesbay.us/mission> (last visited Apr. 15, 2024).

209. 33 U.S.C. §1267.

210. See *Fowler v. Environmental Prot. Agency*, No. 1:09-CV-00005-CKK (D.D.C. Jan. 5, 2009); *Chesapeake Bay Found. v. Environmental Prot. Agency*, No. 1:20-cv-2529 (CJN) (D.D.C. Nov. 20, 2020).

211. There should be no ambiguity about what Congress requires of EPA. It is the nation’s CWA regulatory and enforcement arm, and the Bay is the largest impaired estuary in the nation. While limited resources require a level of agency discretion, unfettered discretion leads agencies to waver in the face of political opposition. Continued vacillation will prove fatal for the Bay.

212. The 2014 Chesapeake Bay Agreement Affirmation and Signature page states, “As Chesapeake Bay Program Partners, we acknowledge that this Agreement is voluntary and subject to the availability of appropriated funds. This Agreement is not a contract or an assistance agreement.” See CHESAPEAKE WATERSHED AGREEMENT, *supra* note 27.

213. See *Cuyler v. Adams*, 449 U.S. 433, 438-42 (1981).

214. DRBC, *Home Page*, <https://nj.gov/drbc/> (last visited Apr. 15, 2024); SRBC, *Home Page*, <https://srbc.gov/> (last visited Apr. 15, 2024).

215. DRBC art. 5; SRBC art. 5.

216. See *Virginia v. Tennessee*, 148 U.S. 503 (1893) (only compacts that affect power delegated to the federal government or alter the political balance within the federal system require the consent of Congress).

217. According to the Chesapeake Bay Commission:

After considering several possible structures for cooperatively managing the Bay, including direct federal involvement, the Advisory Commission recommended the establishment of a bi-state Commission. . . . [T]his option was preferable as it involved no federal statutory limitations, it highlighted state responsibility for the Bay clean-up and it strengthened policy linkages between the states.

Chesapeake Bay Commission, *History*, <https://www.chesbay.us/history> (last visited Apr. 15, 2024).

218. Adage: Repeating the same action over and over and expecting a different result is the definition of insanity.