

PRECEDENTIAL

UNITED STATES COURT OF APPEALS
FOR THE THIRD CIRCUIT

No. 13-4079

AMERICAN FARM BUREAU FEDERATION;
PENNSYLVANIA FARM BUREAU;
THE FERTILIZER INSTITUTE;
NATIONAL CHICKEN COUNCIL;
UNITED STATES POULTRY & EGG ASSOCIATION;
NATIONAL PORK PRODUCERS COUNCIL;
NATIONAL CORN GROWERS ASSOCIATION;
NATIONAL TURKEY FEDERATION; NATIONAL
ASSOCIATION OF HOME BUILDERS

v.

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY;

CHESAPEAKE BAY FOUNDATION INC;
CITIZENS FOR PENNSYLVANIA'S FUTURE;
DEFENDERS OF WILDLIFE;
JEFFERSON COUNTY PUBLIC SERVICE DISTRICT;
MIDSHORE RIVERKEEPER CONSERVANCY;
NATIONAL WILDLIFE FEDERATION;
VIRGINIA ASSOCIATION OF MUNICIPAL
WASTEWATER AGENCIES, INC.;

MARYLAND ASSOCIATION OF MUNICIPAL
WASTEWATER AGENCIES;
NATIONAL ASSOCIATION OF CLEAN
WATER AGENCIES;
PENNSYLVANIA MUNICIPAL AUTHORITIES
ASSOCIATION;
CITY OF ANAPOLIS, MARYLAND

(Intervenors in D.C.)

American Farm Bureau Federation;
Pennsylvania Farm Bureau;
The Fertilizer Institute; National
Chicken Council; U.S. Poultry & Egg
Association; National Pork Producers
Council; National Corn Growers
Association; National Turkey
Federation; National Association of
Home Builders,

Appellants

Appeal from the United States District Court
for the Middle District of Pennsylvania
(D.C. Civil Action No. 1-11-cv-00067)
District Judge: Honorable Sylvia H. Rambo

Argued November 18, 2014

Before: AMBRO, SCIRICA, and ROTH, Circuit Judges

(Opinion filed: July 6, 2015)

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OPINION OF THE COURT

AMBRO, Circuit Judge

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I. Introduction

The Environmental Protection Agency (“EPA”) published in 2010 the “total maximum daily load” (“TMDL”) of nitrogen, phosphorous, and sediment that can be released into the Chesapeake Bay (the “Bay”) to comply with the Clean Water Act, 33 U.S.C. § 1251 *et seq.*. The TMDL is a comprehensive framework for pollution reduction designed to “restore and maintain the chemical, physical, and biological integrity” of the Bay, 33 U.S.C. § 1251, the subject of much ecological concern over several decades.

Trade associations with members who will be affected by the TMDL’s implementation—the American Farm Bureau Federation, the National Association of Home Builders, and other organizations for agricultural industries that include fertilizer, corn, pork, and poultry operations (collectively, “Farm Bureau”)—sued. They allege that all aspects of the TMDL that go beyond an allowable sum of pollutants (*i.e.*, the most nitrogen, phosphorous, and sediment the Bay can safely absorb per day) exceeded the scope of the EPA’s

authority to regulate, largely because the agency may intrude on states' traditional role in regulating land use.

The District Court ruled against Farm Bureau, and it appeals. For the reasons that follow, we side with the EPA and affirm the District Court's ruling.

II. Background

The EPA and seven states—Virginia, West Virginia, Maryland, Delaware, Pennsylvania, New York, and the District of Columbia, which is a “state” for Clean Water Act purposes, 33 U.S.C. § 1362(3)—have engaged in a decades-long process to develop a plan to improve the quality of the water in the Chesapeake Bay, the largest estuary in North America. The Bay's watershed area of 64,000 square miles contains tens of thousands of lakes, rivers, streams and creeks. The Bay itself has a surface area of 4,500 square miles, and it has 11,684 miles of shoreline, longer than the coastline from San Diego, California to Seattle, Washington.

A. *The Chesapeake Bay, 1608–1972*

Before Europeans settled the Bay, it supported much sea life. As two associates of John Smith wrote, “Neither better fish more plenty or variety had any of us ever seene, in any place swimming in the water, then in the bay of Chesapeack.” Walter Russell & Anas Todkill *et al.*, *The Accidents that Happened in the Discoverie of the Bay, in 1 The Complete Works of Captain John Smith (1580–1631)* Philip L. Barbour, ed., 224, 228 (1986). The fertile land of the watershed and the beauty and commercial value of the Bay proved attractive. By 1950 about 7,000,000 people lived in the watershed; today it is home to 17,000,000, and by 2030 the population may reach 20,000,000.

The watershed area not only sustains its growing human population; it also supports a great deal of commerce, including fishing, shipping, farming, and tourism. All these activities, as well as other incidents of daily life, contribute pollutants to the Bay. As a result, it is plagued by dead zones with opaque water and algae blooms that render significant parts of it unable to support aquatic life. Surrounding jurisdictions recognize that the Bay absorbs far too much nitrogen, phosphorous, and sediment to be the healthy ecosystem it once was. These threats to the Bay (and to the livelihood of many who depend on its bounty) have been known for a long time both to scientists and to observant lay people. As a Pulitzer-Prize winning chronicler of Bay life put it:

Coliform bacteria indices, atomic plant pass-throughs, siltation-caused reduced photosynthetic capabilities, oxygen deprivation, nutrient loading and the doubling rate . . . I doubted many watermen understood the full threat of their quiet and insidious workings. Perhaps it was easier to put it the way they do. You look hard at the water and sometimes it seems like it's getting a little old and tired, a little messy. Simple as that, if anyone cares to notice.

William W. Warner, *Beautiful Swimmers: Watermen, Crabs and the Chesapeake Bay* 273–74 (1976).¹

¹ Warner wrote in the afterword to the 1994 edition of his book, “There is . . . no doubt that the Bay’s natural resources have seriously eroded since” *Beautiful Swimmers* was first published. William W. Warner, *Beautiful Swimmers: Watermen, Crabs and the Chesapeake Bay* 293 (1994).

B. The Clean Water Act, 1972

Congress took official note that the waters of the United States, including the Bay, needed protection and rescue. In 1972, it passed major revisions to federal water pollution legislation known as the Clean Water Act. Under that law, the EPA and the states participate in a “cooperative federalism” framework working together to clean the Nation’s waters.

We deal primarily with one provision of this complex statute, which calls for the establishment of a “total maximum daily load” of pollution for certain waters. 33 U.S.C. § 1313(d)(1)(C).² The parties dispute what those words mean. They are not defined in the Act, but the EPA has interpreted them to require publication of a comprehensive framework for pollution reduction in a given body of water. When we discuss this comprehensive document, we refer to it by the acronym “TMDL”; by contrast, when we analyze the statutory text, we refer to the words “total maximum daily load.”

The Act provides that states set a total maximum daily load, and the EPA approves or disapproves it. If the EPA disapproves, it must create the TMDL itself. In this case, the Chesapeake Bay watershed jurisdictions agreed that they

² As in many areas of the law, specialized practitioners refer to the uncodified sections of provisions in the Statutes at Large. The parties thus, for example, cite the Clean Water Act § 303(d)(1)(C) as the total maximum daily load provision. Unless otherwise noted, we cite the law by reference to the U.S. Code, as we find those volumes easier to navigate than the Statutes at Large.

would not submit TMDLs, and the EPA would do so in the first instance.

To understand the parties' arguments, we consider the statutory context in which the words "total maximum daily load" arise. The Clean Water Act does not simply direct the publication of the TMDL; it is one step in a process with several layers, each placing primary responsibility for pollution controls in state hands with "backstop authority" vested in the EPA. TMDLs happen after a state enacts pursuant to its law (but required by the Clean Water Act) "water quality standards." The state designates a use for each relevant water (*e.g.*, recreation or fishing) and sets a target water quality based on that use. *Id.* § (c)(1) & (2). The EPA must approve or disapprove the water quality standards. If the latter, it must promulgate its own water quality standard for the state. 33 U.S.C. § 1313(a)(3)(A)–(C) & (b).

Once water quality standards are in effect, the EPA and the states share responsibility for making sure that pollutants discharged into waters do not violate those standards. Under the legislative and regulatory system for cleaning our Nation's waters, pollution comes from "point" and "nonpoint" sources. The former are discrete places where pollutants are discharged, like a drainpipe at a wastewater treatment plant, while the latter are diffuse sources of pollution, like farms or roadways, from which runoff drains into a watershed.

The Clean Water Act gives the EPA primary responsibility for regulating point sources by establishing "effluent limitations," 33 U.S.C. § 1311(b)(1)(A), which are pollution caps that by statutory definition apply only to point sources. *Id.* § 1362(11). States in turn regulate nonpoint sources. There is significant input and oversight from the

EPA, but it does not regulate nonpoint sources directly. *Id.* § 1329(b) & (e).

Section 1313 anticipates that effluent limitations on point sources will be the front line of the defense against water pollution. But, acknowledging that effluent limitations may not be enough, § 1313(d) requires the states to submit to the EPA a list of all bodies of water (or, by regulation, any segment of a body of water) for which effluent limitations and technology-based point source controls are insufficient to meet the applicable water quality standard. These areas are known as “water quality limited segment[s],” 40 C.F.R. § 131.3(h), and the list on which they appear often goes by the “Section 303(d) list” after the part of the uncodified Clean Water Act to which 33 U.S.C. § 1313(d) corresponds.

Together with the Section 303(d) list, states must submit “total maximum daily loads” for those pollutants that cannot be brought to an acceptable level by point source controls. 33 U.S.C. § 1313(d)(1)(A) & (C). After a state submits its Section 303(d) list and TMDL, the EPA must approve or disapprove them; if it disapproves, it must create its own list and TMDL. 33 U.S.C. § 1313(d)(2).

To recap: states set water quality standards for the waters within their borders, and they must submit to the EPA a list of those waters for which point-source pollution limitations alone are not enough to make the water meet the applicable quality standard; for all the waters on that list, a state must submit a TMDL. If the EPA disapproves a state submission, it takes responsibility for the unmet requirement(s). As noted, for the Chesapeake Bay the relevant states and the EPA agreed that the EPA would draft the TMDL in the first instance.

This case primarily concerns the meaning of “total maximum daily load,” words that occur in the part of the Clean Water Act that requires states (or, in this case, the EPA) to:

establish . . . the total maximum daily load[] for those pollutants which the Administrator identifies under section 1314(a)(2) of this title as suitable for such calculation. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.

33 U.S.C. § 1313(d)(1)(C). The Act directed states to include “total maximum daily load[s]” in their required “continuing planning process[es]” no later than February 15, 1973. 33 U.S.C. § 1313(e)(2).

C. Definition and Development of TMDLs, 1972–2000

This deadline, it turns out, was overly optimistic, as both states and the EPA have been slow in establishing TMDLs. See Oliver A. Houck, *TMDLs, Are We There Yet?: The Long Road Toward Water Quality–Based Regulation under the Clean Water Act*, 27 *Envtl. L. Rep. (Envtl. L. Inst.)* 10,391, 10,392–93 (1997). The initial blame cannot be laid on the states because the statute explicitly requires “the Administrator” of the EPA to identify the pollutants to which the TMDL requirement would apply. 33 U.S.C. § 1313(d)(1)(C). In 1975 the EPA issued a regulation to define “total maximum daily load,” but even then “the Agency still had not identified those pollutants that would be

subject to TMDL development.” Dianne K. Conway, *TMDL Litigation: So Now What?*, 17 Va. Env'tl. L.J. 83, 98 (1997). It did so in 1978 and required states to submit TMDLs by June 1979.

The EPA's regulations define “total maximum daily load” as the sum of “waste load allocations” and “load allocations.” 40 C.F.R. § 130.2(i). Also by regulatory definition, waste load allocations are pollutant loads that come from point sources; load allocations come from nonpoint sources. 40 C.F.R. § 130.2(g) & (h).³ The EPA applies these allocations to any pollutant that brings a body of water below an acceptable standard of cleanliness. See 43 Fed. Reg. 60,662 (Dec. 28, 1978) (identifying “all pollutants” as suitable for TMDL development).

Once the EPA had laid out the required contents of TMDLs, it and the states remained tardy in establishing them. As a result, a wave of citizen-suits in the 1980s led to a consensus that a state's failure to submit a TMDL should be deemed a “constructive submission” that no TMDL is needed, triggering the EPA's duty to accept that conclusion or promulgate its own TMDL. *Kingman Park Civic Ass'n v. EPA*, 84 F. Supp. 2d 1, 5 (D.D.C. 1999) (collecting cases). Even these successes did not spur immediate action, as courts initially would not follow the “constructive submission” theory “in cases brought against states which engaged in some level of TMDL activity, no matter how minute.” Conway, *TMDL Litigation*, 17 Va. Env'tl. L.J. at 95.

In the mid-1990s, nearly a quarter century past the Clean Water Act's “deadline,” courts became frustrated with

³ In the initial regulation defining TMDLs, the terms were different, but the EPA still required allocation between point and nonpoint sources. 40 Fed. Reg. 55,346 (Nov. 28, 1975).

the prevailing “wait-and-see” approach and directed states and the EPA to develop TMDLs with more dispatch. See *Sierra Club v. Hankinson*, 939 F. Supp. 865 (N.D. Ga. 1996), 939 F. Supp. 872 (N.D. Ga. 1996); *Idaho Sportsmen’s Coalition v. Browner*, 951 F. Supp. 962 (W.D. Wash. 1996). Following the success of these cases, “citizen-plaintiffs, imbued with the ecosystem consciousness, launched a tidal wave of lawsuits to force the EPA and the states to implement the TMDLs process.” Michael M. Wenig, *How “Total” Are “Total Maximum Daily Loads”?—Legal Issues Regarding the Scope of Watershed-Based Pollution Control Under the Clean Water Act*, 12 Tul. Envtl. L.J. 87, 94 (1998).

The lawsuits of the 1990s were followed by the actual drafting of thousands of TMDLs, which the EPA has described as “the technical backbone” of its approach to cleaning the Nation’s waters. EPA Office of Water, *Total Maximum Daily Load (TMDL) Program Draft TMDL Program Implementation Strategy* § 1.2 (1996). TMDLs are now thorough “informational tools that allow the states to proceed from the identification of waters requiring additional planning to the required plans.” *Pronsolino v. Nastri*, 291 F.3d 1123, 1129 (9th Cir. 2002). TMDLs are not self-executing, but they serve as the cornerstones for pollution-reduction plans that do create enforceable rights and obligations.⁴

⁴ The parties debate what precisely TMDLs are. Our understanding of them as informational tools is supported by every case and piece of scholarship to consider them as well as the language of the Chesapeake Bay TMDL itself. See *City of Arcadia v. EPA*, 411 F.3d 1103, 1105 (9th Cir. 2005); *Sierra Club v. Meiburg*, 296 F.3d 1021, 1025 (11th Cir. 2002) (“Each TMDL serves as the goal for the level of that pollutant

D. *The Chesapeake Bay TMDL, 2000–2010*

Development of the Chesapeake Bay TMDL began in earnest with the Chesapeake 2000 Agreement, whereby the EPA and political backers from the Bay states made commitments geared to reducing pollution in the Bay. This Agreement eventually gave way to states' submission to the EPA of "Phase I Watershed Improvement Plans," which were drafts proposing target pollutant limitations and how the

in the waterbody to which that TMDL applies."); *Bravos v. Green*, 306 F. Supp. 2d 48, 56 (D.D.C. 2004) ("EPA's approval of a State's TMDL does not translate into approval of the State's implementation plan."); *City of Arcadia v. EPA*, 265 F. Supp. 2d 1142, 1144 (N.D. Cal. 2003) ("TMDLs established under Section 303(d)(1) of the CWA function primarily as planning devices and are not self-executing."); *Idaho Sportsmen's Coal. v. Browner*, 951 F. Supp. 962, 966 (W.D. Wash. 1996) ("TMDL development in itself does not reduce pollution. It is only a step toward bringing [water quality limited segments] into compliance with water quality standards; TMDLs inform the design and implementation of pollution control measures."); Corey Longhurst, *Where Is the Point? Water Quality Trading's Inability to Deal with Nonpoint Source Agricultural Pollution*, 17 Drake J. Agric. L. 175, 187 (2012); Jan G. Laitos & Heidi Ruckriegle, *The Clean Water Act and the Challenge of Agricultural Pollution*, 37 Vt. L. Rev. 1033, 1054–57 (2013) (criticizing courts for the limited legal effect they have given to TMDLs); J.A. 1113 ("The cornerstone of the accountability framework is the jurisdictions' development of [Watershed Improvement Plans], which serve as roadmaps for how and when a jurisdiction plans to meet its pollutant allocations under the TMDL.").

states would achieve them. The EPA developed the Chesapeake Bay TMDL in reliance on these plans and did so only after approving the pollutant limitations and concluding that each state had given “reasonable assurance” of actually meeting the targets in its Watershed Improvement Plan. Several of the first drafts of the Phase I Watershed Improvement Plans did not provide reasonable assurance, whereupon the EPA conferred with the relevant jurisdictions, they revised their Plans, and the EPA incorporated those revisions. It determined that the final draft Phase I Watershed Improvement Plans provided reasonable assurance in all respects save two sources of pollution (Pennsylvania urban stormwater and West Virginia agriculture), and it imposed a “backstop adjustment,” meaning that it will require greater reductions from point sources in Pennsylvania and West Virginia if those states cannot meet their projected load allocations. The EPA also decided to provide a “backstop allocation” for New York because that jurisdiction proposed to discharge too much nitrogen and phosphorous; this will also require more stringent point-source limitations than New York proposed.

After making these adjustments to the states’ Watershed Improvement Plans, the EPA incorporated them into the final Chesapeake Bay TMDL. It is detailed, as it includes point- and nonpoint-source limitations on nitrogen, phosphorous, and sediment for 92 segments of the Bay identified as overpolluted and further allocates those limits to specific point sources and to nonpoint source sectors. The TMDL sets target dates, anticipating that 60% of its proposed actions will be complete by 2017, with all pollution control measures in place by 2025. The next step, yet to happen, is for the states to develop their Phase II Watershed Improvement Plans to implement the TMDL.

On December 29, 2010, the EPA promulgated the TMDL through the notice-and-comment rulemaking process of the Administrative Procedure Act (“APA”). See 5 U.S.C. § 553. Over 45 days, the EPA held 18 public meetings (at which 2,500 members of the public attended), and it received more than 14,000 comments. It took these comments and meetings into account when publishing the final TMDL.

E. Procedural Background, 2011–Present

As discussed above, TMDLs have long been the subject of litigation. Environmental groups continue to press the EPA to promulgate more stringent TMDLs. *E.g., Ctr. For Biological Diversity v. EPA*, No. 13-cv-1866, 2015 WL 918686 (W.D. Wash. Mar. 2, 2015). Not to be left on the sidelines, commercial concerns took to the courts to air their grievances with the EPA—this time not for acting too slowly, but for acting at all. Our case is of this most recent variety.

In January 2011, Farm Bureau sued the EPA under the APA and the citizen-suit provision of the Clean Water Act. It asserted that the EPA exceeded its statutory authority by including deadlines and allocations in the TMDL and by requiring “reasonable assurance” from the states in drafting that document. The District Court granted summary judgment in favor of the EPA, and this appeal followed.

III. Jurisdiction

The District Court had jurisdiction under 5 U.S.C. § 702 and 28 U.S.C. § 1331. We have jurisdiction pursuant to 28 U.S.C. § 1291, and our standard of review is *de novo*. *Pastore v. Bell Tel. Co. of Pennsylvania*, 24 F.3d 508, 511 (3d Cir. 1994).

The TMDL is yet unenforced against anyone, nor can it be until it is implemented as part of a state's continuing planning process for managing water pollution, 33 U.S.C. § 1313(e). Thus, Farm Bureau's standing to challenge the TMDL and the ripeness of this dispute are open to debate. The EPA does not challenge Farm Bureau's standing on appeal, but we have a free-standing duty to determine our jurisdiction.

A. *Standing*

"To ensure the proper adversarial presentation, . . . a litigant must demonstrate that it has suffered a concrete and particularized *injury* that is either actual or imminent, that the injury is *fairly traceable* to the defendant, and that it is likely that a favorable decision will *redress* that injury." *Massachusetts v. EPA*, 549 U.S. 497, 517 (2007) (emphases added). The injury claimed by members of the trade associations comprising Farm Bureau is the certainty that they will incur compliance costs when the TMDL is implemented and enforcement mechanisms are put in place. Thus, even if the TMDL does not cause injury by itself, it will give way to requirements with which Farm Bureau will have to comply. See 33 U.S.C. § 1313(e) (mandating TMDL's incorporation into states' "continuing planning process[es]"). Specifically, states' continuing planning processes will, by operation of the Clean Water Act, impose on the sectors in which Farm Bureau operates more stringent nonpoint source pollutant limitations than currently in place. See TMDL Appendix R. These requirements will in turn cause compliance costs for Farm Bureau, a classic injury-in-fact. *Danvers Motor Co. v. Ford Motor Co.*, 432 F.3d 286, 291 (3d Cir. 2005) ("While it is difficult to reduce injury-in-fact to a simple formula, economic injury is one of its paradigmatic forms.").

Although there is a plausible argument that Farm Bureau's injury is insufficiently particularized and too speculative, as we do not know precisely what form new regulations will take, it is akin to injuries the Supreme Court has found sufficient for standing. *Ass'n of Data Processing Serv. Organizations, Inc. v. Camp*, 397 U.S. 150, 152 (1970) (data processors have standing when regulation expanded number of institutions authorized to perform data processing, thus increasing competition in the field); *Barlow v. Collins*, 397 U.S. 159, 164 (1970) (tenant-farmers had standing when new regulation effectively gave incentives to landlords to charge higher rents). In general, regulated entities that assert likely economic injury have standing even before the challenged regulatory action fully takes effect. See *Sierra Club v. Morton*, 405 U.S. 727, 733–34 (1972) (“[P]alpable economic injuries have long been recognized as sufficient to lay the basis for standing, with or without a specific statutory provision for judicial review.”)

Fair traceability and redressability are easily met here. There is no doubt that the EPA promulgated the TMDL, and removing the parts to which Farm Bureau objects would substantially lighten its regulatory burden.

B. Ripeness

Similarly, a pre-enforcement challenge to a regulation is ripe where the issues presented are fit for judicial review and hardship to the parties would result without hearing the suit. *Abbott Labs. v. Gardner*, 387 U.S. 136, 149 (1967). Here the parties present a purely legal dispute on a well-developed record about the EPA's process of promulgating a TMDL. Although the TMDL has yet to be incorporated into a state's continuing planning process and enforced against any individual plaintiff, members of the trade associations will have reason to limit their discharge of pollutants in

anticipation of the TMDL's implementation. And it would impose hardship on the EPA and the states not to hear this dispute now because they are poised to spend more time, energy, and money in developing an implementation plan. If there is something wrong with the TMDL, it is better to know now than later.

As we have jurisdiction and the case is ripe, we proceed to the merits.

IV. Merits

Farm Bureau interprets the words "total maximum daily load" in the Clean Water Act, codified at 33 U.S.C. § 1313(d)(1)(C), as unambiguous: a TMDL can consist only of a number representing the amount of a pollutant that can be discharged into a particular segment of water and nothing more. Thus it argues that the EPA overstepped its statutory authority in drafting the Chesapeake Bay TMDL when the agency (1) included in the TMDL allocations of permissible levels of nitrogen, phosphorous, and sediment among different kinds of sources of these pollutants, (2) promulgated target dates for reducing discharges to the level the TMDL envisions, and (3) obtained assurance from the seven affected states that they would fulfill the TMDL's objectives. In Farm Bureau's view, even if allocations, target dates, and reasonable assurance are useful in calculating the number that is the TMDL, the final document may not specify a distribution of pollutants from point and nonpoint sources or deadlines for meeting the target reductions in pollutant discharge, nor may the EPA in drafting the document obtain any assurance from states that they will meet the targets.

A. *Framework for our Decision*

The parties agree that this case is governed by *Chevron v. NRDC*, 467 U.S. 837 (1984). The mechanics of *Chevron* are familiar: at “Step One,” courts inquire “whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.” *Id.* at 842–43. In framing “the precise question at issue,” we ask “whether the statute unambiguously forbids the Agency’s interpretation.” *Barnhart v. Walton*, 535 U.S. 212, 217–18 (2002). When the intent of Congress is expressed ambiguously in some way relevant to the case at hand, courts proceed to “Step Two.” There the agency’s interpretations “are given controlling weight unless they are arbitrary, capricious, or manifestly contrary to the statute.” *Chevron*, 467 U.S. at 844.

Underlying *Chevron*’s framework is courts’ understanding that Congress sometimes uses ambiguous language to delegate a scope of authority (or a gap to fill) to an administrative agency charged with administering the ambiguous statute. This has not always been clear, as *Chevron* itself offered a variety of justifications for its outcome, but “the [Supreme] Court over the last decade, beginning in *United States v. Mead Corp.*, [533 U.S. 218 (2001)], has explicitly re-grounded *Chevron* in congressional intent,” specifically, “intent to delegate.” Abbe R. Gluck, *What 30 Years of Chevron Teach Us About the Rest of Statutory Interpretation*, 83 Fordham L. Rev. 607, 610 & n.7 (2014) (footnotes omitted); *Mead*, 533 U.S. at 226–27 (“[A]dministrative implementation of a particular statutory provision qualifies for *Chevron* deference when it appears that Congress delegated authority to the agency generally to make rules carrying the force of law, and that the agency

interpretation claiming deference was promulgated in the exercise of that authority.”). Four years after *Mead*, the Supreme Court reaffirmed and made more explicit that *Chevron* deference recognizes Congress’s intent to delegate gap-filling power to agencies. *National Cable & Telecomms. Ass’n v. Brand X Internet Services*, 545 U.S. 967, 980 (2005) (“*Chevron* . . . held that ambiguities in statutes within an agency’s jurisdiction to administer are delegations of authority to the agency to fill the statutory gap in reasonable fashion.”); see also Peter L. Strauss, “*Deference*” *Is Too Confusing—Let’s Call Them “Chevron Space” and “Skidmore Weight,”* 112 Colum. L. Rev. 1143, 1145 (2012) (“‘*Chevron* space’ denotes the area within which an administrative agency has been statutorily empowered to act in a manner that creates legal obligations or constraints—that is, its delegated or allocated authority.”).

Whether an interpretation falls within the scope of authority that Congress has delegated is for the courts to decide at Step One because “[t]he fact that Congress has left a gap for the agency to fill means that courts should defer to the agency’s reasonable gap-filling decisions, not that courts should cease to mark the bounds of delegated agency choice.” *Negusie v. Holder*, 555 U.S. 511, 531 (2009) (Stevens, J., concurring in part and dissenting in part); see also *Util. Air Regulatory Grp. v. EPA*, 134 S. Ct. 2427, 2442 (2014) (“Even under *Chevron*’s deferential framework, agencies must operate within the bounds of reasonable interpretation.” (internal quotation marks omitted)); *MCI Telecomms. Corp. v. Am. Tel. & Tel. Co.*, 512 U.S. 218, 229 (1994) (“[A]n agency’s interpretation of a statute is not entitled to deference when it goes beyond the meaning that the statute can bear.”); Peter L. Strauss *et al.*, *Gellhorn & Byse’s Administrative Law* 1073 (11th ed. 2011) (“*Chevron* said that within the possible meanings of a statute, a reviewing court should accept any reasonable meaning given by the agency. As the *MCI* case

[which never reached Step Two, 512 U.S. at 229] emphasizes, what the reasonable meanings might be is, within the *Chevron* universe, a question for the courts to decide.”).

When the agency interpretation faithfully fills the gap that Congress created, we move to Step Two, where we do not ask whether it is the best possible interpretation of Congress’s ambiguous language. Instead, we extend considerable deference to the agency and inquire only whether it made “a reasonable policy choice” in reaching its interpretation. *Brand X*, 545 U.S. at 986.

With the above framework in mind, we proceed to Step One.

B. *Chevron Step One*

To repeat, before us is whether in calculating and expressing a “total maximum daily load,” 33 U.S.C. § 1313(d)(1)(C), the EPA may include (1) allocations of pollution levels among different kinds of sources, (2) a timeframe for complying with the TMDL’s requirements, and (3) assurance from the states that will implement the TMDL. Farm Bureau concludes that the statute unambiguously forecloses the EPA’s interpretation and hence the agency is not entitled to deference. Several considerations persuade us otherwise.

1. Case Law on TMDLs

The District Court noted that it was a question of first impression whether a TMDL could include more than a quantity of a pollutant. *Am. Farm Bureau Fed’n v. EPA*, 984 F. Supp. 2d 289, 316–18 (M.D. Pa. 2013). Since its decision, there has been no development in the case law on that point. However, we do not write on a completely blank slate. As

the District Court also observed, many circuit and district courts have defined TMDLs to accord with the EPA's regulations (implying they did not present a problem). *E.g.*, *Upper Blackstone Water Pollution Abatement Dist. v. EPA*, 690 F.3d 9, 14 n.8 (1st Cir. 2012); *Thomas v. Jackson*, 581 F.3d 658, 662 (8th Cir. 2009); *Friends of Earth v. EPA*, 333 F.3d 184, 186 n.5 (D.C. Cir. 2003); *Sierra Club v. Meiburg*, 296 F.3d 1021, 1025 (11th Cir. 2002); *Hayes v. Whitman*, 264 F.3d 1017, 1021 n.2 (10th Cir. 2001); *Dioxin/Organochlorine Ctr. v. Clarke*, 57 F.3d 1517, 1520 (9th Cir. 1995). If Farm Bureau were correct that the statute unambiguously supports its reading, we would expect one of the judges who has presided over TMDL litigation to have noticed the disconnect between the statute and the regulation, but there has been none.

Additionally, in response to challenges from both environmental and industry groups, courts have recognized the EPA's authority to fill the Clean Water Act's considerable gaps on how to promulgate a "total maximum daily load." *Pronsolino*, 291 F.3d at 1131 ("[T]he EPA has the delegated authority to enact regulations carrying the force of law regarding the identification of § 303(d)(1) waters and TMDLs."); *NRDC v. Muszynski*, 268 F.3d 91, 98–99 (2d Cir. 2001) ("We are not prepared to say Congress intended that such far-ranging agency expertise be narrowly confined in application to regulation of pollutant loads on a strictly daily basis. . . . Accordingly, we agree with [the] EPA that a 'total maximum daily load' may be expressed by another measure of mass per time."); *Anacostia Riverkeeper, Inc. v. Jackson*, 798 F. Supp. 2d 210, 245 (D.D.C. 2011) ("[T]he [Clean Water Act]'s references to water quality standards require only that a TMDL set load levels 'necessary to attain and maintain applicable water quality standards,' 33 U.S.C. § 1313(d)(1)(C), and do[] not otherwise refer to any particular timeframe. . . . In light of the CWA's silence on whether

applicable criteria must be achieved at all times or may be periodically violated, the Court looks to whether [the] EPA has reasonably resolved the issue.”).

The only time a court has considered an aspect of the phrase “total maximum daily load” unambiguous was in response to a challenge to the EPA’s practice of promulgating total maximum seasonal or annual loads. The D.C. Circuit held that the word “daily” was unambiguous, though it did not consider the above phrase unambiguous in all respects. *Friends of Earth, Inc. v. EPA*, 446 F.3d 140, 144 (D.C. Cir. 2006). The Second Circuit disagrees with the D.C. Circuit on this point, *Muszynski*, 268 F.3d at 98–99, and even after *Friends of Earth* the District of D.C. has allowed the EPA to issue total maximum annual or seasonal loads *in addition* to daily loads because, although the statute is explicit about the requirement for a daily load, it is silent on whether another timeframe may be used when that would be more appropriate for the particular pollutant at issue. *Anacostia Riverkeeper*, 798 F. Supp. 2d at 245.

Turning from the specific statutory language in this case, the Supreme Court has held that *Chevron* deference is appropriate where an agency is charged with administering a complex statutory scheme requiring technical or scientific sophistication. *Brand X*, 545 U.S. at 1002–03; *Nat’l Cable & Telecomms. Ass’n, Inc. v. Gulf Power Co.*, 534 U.S. 327, 339 (2002) (“As it was in *Chevron*, the subject matter here is technical, complex, and dynamic. . . .” (citation omitted)). There is no doubt that the Clean Water Act falls into this category of legislation. See, e.g., *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121, 132–33 (1985) (“[The Act] constituted a comprehensive legislative attempt to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters. This objective incorporated a broad, systemic view of the goal of maintaining and

improving water quality.” (internal quotation marks and citation omitted)). Moreover, Congress’s delegations to the EPA under the Clean Water Act are not limited to occasional ambiguous words; instead, Congress granted broad regulatory authority to the EPA, charging that, “[e]xcept as otherwise expressly provided in this chapter, the Administrator of the [EPA] . . . shall administer this chapter.” 33 U.S.C. § 1251(d).

Mindful of agencies’ considerable power under complex statutory regimes like the Clean Water Act, coupled with courts’ consistent determinations that “total maximum daily load” is ambiguous (except—though there is a split of authority on the point—the word “daily”) and the fact that no court has adverted to any problem with the EPA’s regulatory interpretation of the phrase, we turn to the text of the TMDL provision.

2. Statutory Text

Farm Bureau’s strongest argument is that Congress specifically authorized the EPA to publish “*total* maximum daily load[s] . . . at a *level* necessary to implement the applicable water quality standards” 33 U.S.C. § 1313(d)(1)(C) (emphases added). Under Farm Bureau’s reading, a “total load” is just a number, like the “total” at the bottom of a restaurant receipt. This ordinary understanding of the word “total” is supported, the argument continues, because the load is to be established at a “level,” which can be high or low (so long as it is necessary to implement the water quality standards); in any event it should not be expressed as a comprehensive framework, and in no event can a TMDL include allocations among point and nonpoint sources, deadlines, and the reasonable assurance requirement.

This argument has some intuitive appeal, but other readings are possible. Our most significant textual concern is that Farm Bureau's analysis makes the word "total" redundant. "Maximum daily load[s] established at a level necessary to implement the applicable water standard" would mean the same thing that Farm Bureau argues "total maximum daily load" means: a number set at a level needed to alleviate water pollution. Applying the canon against surplusage, a plausible understanding of "total" is that it means the sum of the constituent parts of the load. The load is still set at the level necessary to fight pollutants, but it is expressed in terms of a total of the different relevant allocations.

Other uses of "total" in the Clean Water Act support this reading. For example, in a section relating to the EPA's power to grant funds to publicly owned treatment works, the agency must consider "the *total* cost of operation and maintenance of such works by each user class (taking into account total waste water loading of such works, the constituent elements of the wastes, and other appropriate factors)." 33 U.S.C. § 1284(b)(1) (emphasis added). Admittedly, the explicit listings of factors in calculating the "total cost" under § 1284 distinguishes that use of "total" from the language in § 1313, yet it indicates that Congress does use the word to mean something more than a single number. *See also id.* § 1284(b)(4) (requiring "applicant to establish a procedure under which the residential user will be notified as to that *portion* of his *total* payment which will be *allocated* to the cost of the waste treatment services." (emphases added)). Another law relating to our Nation's waters requires the EPA to consider "the total quantity of commerce supported by" a given body of water. *Id.* § 2238(d)(1)(C)(i) (Water Resources Reform and Development Act of 2014, P.L. 113-121 § 2102). It is unclear how "commerce" can be expressed as a number, and

we surmise that “total” in that context allows the EPA to consider and express a complex mix of activities that affect its judgment.

Additionally, although Congress explicitly required the EPA to establish “total maximum daily loads,” it nowhere prescribed *how* the EPA is to do so. The agency has chosen to lay out in detail (1) how and why it arrived at the number it chose; (2) how it thinks it and affected jurisdictions will be able to achieve that number; (3) why that number is “necessary to implement the applicable water quality standard[.]” *id.* § 1313(d)(1)(C); (4) when it expects the TMDL to achieve the applicable water quality standard; and (5) what it will do if the water quality standard is not met. As the EPA has chosen to use notice-and-comment rulemaking to promulgate TMDLs, the APA likely requires the EPA to provide sufficient information in connection with the TMDL for the public adequately to comment on the agency’s judgment and to make suggestions where appropriate. *Cement Kiln Recycling Coal. v. EPA*, 493 F.3d 207, 225 (D.C. Cir. 2007) (“A notice of proposed rulemaking must provide sufficient factual detail and rationale for the rule to permit interested parties to comment meaningfully.” (internal quotation marks and citations omitted)). The EPA would fall afoul of this requirement if it published only a number with no supporting information, as the public would be unable to comment on the number without knowing whether or how the EPA thought such a level of discharged pollutant could be achieved.

The EPA’s approach also fits the statute’s requirement that the load be established in light of “seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.” 33 U.S.C. § 1313(d)(1)(C). Under Farm Bureau’s approach, these factors that affect the

EPA's calculation would need to remain absent from the TMDL. It would be strange to require the EPA to take into account these specific considerations but at the same time command the agency to excise them from its final product. If anything, the requirements that the TMDL (1) be established at a level necessary to implement water quality standards, with (2) seasonal variations, and (3) a margin of safety that takes into account (4) any lack of knowledge concerning the relationship between effluent limitations and water quality, taken together, tend to suggest that "total maximum daily load" is a term of art meant to be fleshed out by regulation, and certainly something more than a number.

Farm Bureau's textual argument at Step One fails to persuade us that Congress excluded everything other than the sum of pollutants from a TMDL. Congress was ambiguous on the content of the words "total maximum daily load": they are not defined in the statute, and "total" is susceptible to multiple interpretations. Furthermore, the Clean Water Act includes certain substantive requirements that expand the scope of a TMDL beyond a mere number. It is silent on how the EPA must set the loads, and the APA requires the EPA to provide information about how it arrived at its conclusion. These factors suggest that Congress wanted an expert to give meaning to the words it chose, and, as we explain below, we believe the EPA's interpretation falls within the gap created by Congress.

3. Statutory Structure and Purpose

Turning from the text of the provision, we consider the structure and purpose of the Clean Water Act. Broadly speaking, it "anticipates a partnership between the States and the Federal Government, animated by a shared objective: 'to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.' 33 U.S.C. § 1251(a)."

Arkansas v. Oklahoma, 503 U.S. 91, 101 (1992). This goal informs our understanding that “total maximum daily load” is broad enough to include allocations, target dates, and reasonable assurance.

i. Allocations Between Point and Nonpoint Sources

As noted, the Act assigns the primary responsibility for regulating point sources to the EPA and nonpoint sources to the states. The EPA sets limits on pollution that may come from point sources via a permitting process (which can be delegated to the states) known as the National Pollutant Discharge Elimination System. 33 U.S.C. § 1342. Nonetheless, in drafting a TMDL the Clean Water Act unambiguously *requires* the author (here, the EPA) to take into account nonpoint sources (though whether those sources must be expressed is not obvious). This conclusion follows when we consider the steps that precede and culminate in a TMDL.

1. Each state⁵ must designate a use for each body of water within its borders and set a target water quality based on that use. 33 U.S.C. § 1313 (c)(1) & (2). The state must then enact “water quality standards” pursuant to state law. *Id.* § 1313(a) & (b).

2. In order to meet water quality standards, the EPA (or the states to which the EPA has delegated this responsibility) sets “effluent limitations,” which are pollution limits on point sources. *Id.* §§ 1311(b)(1)(A) & 1362(11).

⁵ If a state does not comply with any of the requirements outlined in this list, responsibility shifts to the EPA.

3. States must submit to the EPA a list of the waters within their boundaries for which effluent limitations (a.k.a. point-source pollution limits) are, by themselves, inadequate to attain the applicable water quality standard—*i.e.*, those waters for which *both* point source *and* nonpoint source limitations will be necessary. *Id.* § 1313(d).

4. It is only for these waters, for which point source effluent limitations alone are insufficient, that a state must establish a TMDL.

5. TMDLs set the maximum amount of pollution a water body can absorb before violating applicable water quality standards. In the statutory context noted above, it is impossible to meet those standards by point-source reductions alone. Therefore, the Clean Water Act *requires* the drafter of a TMDL to consider nonpoint-source pollution.

“As should be apparent, TMDLs are central to the Clean Water Act’s water-quality scheme because . . . they tie together point-source and nonpoint-source pollution issues in a manner that addresses the whole health of the water.” *Meiburg*, 296 F.3d at 1025 (internal quotation marks omitted). As far as allocations are concerned, the EPA’s construction of the TMDL requirement comports well with the Clean Water Act’s structure and purpose. Specifically allocating the pollution load between point sources (primarily the EPA’s responsibility) and nonpoint sources (the states’ dominion) is a commonsense first step to achieve the target water quality. *See* Wenig, *How “Total,”* 12 Tul. Envtl. L.J. at 150 (“Ideally, all ecosystem harms should be subject to numerical loading and allocation calculations to maximize TMDLs’ value of providing the ‘technical backbone’ or ‘blueprint’ for a watershed approach.”).

Because TMDLs only relate to bodies of water for which point source limitations are insufficient, they must take into account pollution from both point and nonpoint sources. We believe the congressional silence on how to promulgate a TMDL and the congressional command that a TMDL be established only for waters that cannot be cleaned by point-source limitations alone (necessarily implying that, whatever form the TMDL takes, it must incorporate nonpoint source limitations) combine to authorize the EPA to express load and waste load allocations. To be sure, the statute does not command the EPA's final regulation to allocate explicitly parts of a load among different kinds of sources, but we agree with the EPA that it may do so.

ii. “Deadlines” or “Target Dates”

Similarly, it is common sense that a timeline complements the Clean Water Act's requirement that all impaired waters achieve applicable water quality standards. The amount of acceptable pollution in a body of water is necessarily tied to the date at which the EPA and the states believe the water should meet its quality standard; if the target date is 100 years from now, more pollution per day will be allowable than if the target date is five years from now. Additionally, any meaningful pollution-reduction plan needs to take into account the dynamic nature of watersheds, particularly the fact that they change over time. Robert W. Adler, *Addressing Barriers to Watershed Protection*, 25 *Env'tl. L.* 973, 982 (1995) (“[R]iver systems are four-dimensional in nature: 1) longitudinal (upstream-downstream); 2) lateral (floodplain-uplands); 3) vertical (groundwater-surface water); and 4) temporal (all three spatial dimensions change over time).”). As promulgating an accurate TMDL—that is, one that states a pollutant load “necessary to implement the applicable water quality standards,” 33 U.S.C. § 1313(d)(1)(C)—requires

consideration of a timeline and of changes over time, it is more consistent with the purpose of the Clean Water Act to express the deadline that the EPA relied on in calculating the TMDL than to make states and the public guess what it is.

iii. Reasonable Assurance

Farm Bureau's argument that the Act forbids the EPA from seeking reasonable assurance from the states that their Watershed Improvement Plans will meet their stated goals is also inconsistent with the purpose and structure of the Clean Water Act. The TMDL must be set "at a level necessary to implement the applicable water quality standards." 33 U.S.C. § 1313(d)(1)(C). The EPA chose to set the TMDL with substantial input from the states but, in order to comply with the Clean Water Act and the APA, the EPA would not blindly accept states' submissions. Instead it decided to satisfy itself that the states' proposals would actually "implement the applicable water quality standards." *Id.* This requirement made sure that the EPA could exercise "reasoned judgment" in evaluating the states' proposed standards and was thus consistent with the Clean Water Act. *Ctr. for Biological Diversity v. EPA*, 749 F.3d 1079, 1087 (D.C. Cir. 2014).

iv. Summary of Structure and Purpose

The point of the TMDL is to take into consideration nonpoint-source pollution; no meaningful decision about limiting pollution can be made without specifying a time frame within which pollution is to be eliminated; and the Clean Water Act envisions assurance of effective pollution controls. Preventing the EPA from expressing allocations and timelines and from obtaining reasonable assurance from affected states appears to frustrate those goals, and thus the phrase "total maximum daily load" has enough play in the

joints to allow the EPA to consider and express these factors in its final action.

4. Avoidance Canons

Farm Bureau counters that the Chesapeake Bay TMDL intrudes on land use, an area traditionally regulated by states. It contends that we should not accept the EPA's construction of the words "total maximum daily load" without a clear statement that Congress intended federal involvement in this realm of state policymaking.

This argument requires us to consider *Chevron's* interaction with two canons of statutory construction—constitutional avoidance and the related "federalism canon" that "Congress does not readily interfere" with states' "substantial sovereign powers under our constitutional scheme." *Gregory v. Ashcroft*, 501 U.S. 452, 461 (1991).

How and even whether to apply these canons during a *Chevron* analysis has been a matter of debate in both the judiciary and academia. *Rapanos v. United States*, 547 U.S. 715, 737–38 (2006) (plurality opinion) (rejecting agency interpretation that would impinge on "the States' traditional and primary power over land and water use"); *id.* at 757–58 (Roberts, C.J., concurring) (implying agency interpretation would have been upheld had it been promulgated through notice-and-comment rulemaking); *id.* at 776–77 (Kennedy, J., concurring in the judgment) (rejecting plurality's "federalism concerns"); *id.* at 803 (Stevens, J., dissenting) ("The two canons of construction [federalism and constitutional avoidance] relied on by the plurality . . . fail to overcome the deference owed to the Corps."); Kenneth A. Bamberger, *Normative Canons in the Review of Administrative Policymaking*, 118 Yale L.J. 64, 118 (2008) (suggesting federalism canon could be applied at *Chevron* Step Two);

Scott A. Keller, *How Courts Can Protect State Autonomy from Federal Administrative Encroachment*, 82 S. Cal. L. Rev. 45, 81–91 (2008) (arguing that courts should apply the federalism canon whenever an agency interpretation encroaches on state autonomy); Abbe R. Gluck, *Intersystemic Statutory Interpretation: Methodology as “Law” and the Erie Doctrine*, 120 Yale L.J. 1898, 1987–89 (2011) (arguing that Supreme Court should (but does not) give *stare decisis* effect to interpretive methodologies, including federalism canon); Strauss *et al.*, *Administrative Law* 1091 (questioning existence of federalism canon).

We think the two interpretive canons can be used—like all “traditional tools of statutory construction,” *Chevron*, 467 U.S. at 843 n.9—at the Step One stage of defining the scope of a congressional delegation in light of an agency’s actual interpretation. Put another way, they may be of use as we consider whether an agency’s interpretation falls within a gap Congress has authorized an agency to fill. We begin with federalism.

i. Federalism

The two most factually on-point cases that consider the federalism canon are *Solid Waste Agency of N. Cook Cnty. v. Army Corps of Eng’rs* (SWANCC), 531 U.S. 159 (2001), and *Rapanos*, 547 U.S. 715. In both cases, the Army Corps of Engineers asserted the authority to regulate—*i.e.*, “jurisdiction” in the administrative law sense of the word—certain geographical areas as “waters of the United States.” There was debate among the Supreme Court’s justices about how wet these areas were, but for our purposes it suffices to say that you could not float a ship on them. In those cases, Congress’s intent to alter the traditional federal-state balance was doubtful, as it was unclear whether the Corps even had jurisdiction over the areas at issue. The Court in SWANCC

and a plurality in *Rapanos* were unwilling to accept the Corps' assertion of jurisdiction over what looked like places traditionally regulated by the states.

In our case, however, jurisdiction over the Chesapeake Bay is not at issue. The question is far finer grained: what is a "total maximum daily load"? Even if the consequences of defining the terms of the statute as the EPA has done intrudes more significantly on certain state prerogatives than Farm Bureau's proposal, we already know that the term "total maximum daily load" exists within a cooperative federalism framework and that the area being regulated is clearly within the agency's jurisdiction. In this context, requiring another "clear statement" of congressional intent for every ambiguous term in a highly technical statute, before accepting an interpretation that could affect our federal structure, would defeat one of the central virtues of the *Chevron* framework: Congress may leave interstitial details to expert agencies and need not think through at the drafting stage every possible permutation of agencies' plausible future interpretations. To use the Supreme Court's language disposing of a similar argument (in a different regulatory context), the TMDL provision "explicitly supplants state authority by *requiring*" states to participate in pollution-reduction programs by, in part, submitting a TMDL, "and the meaning of that phrase [here, total maximum daily load] is indisputably a question of federal law." *City of Arlington v. FCC*, 133 S. Ct. 1863, 1873 (2013). Nor can we say that defining "loads" of pollution as allocated among different sources or expressed as a single number is a matter of regulation traditionally reserved to the states. Thus, to the extent the TMDL may affect land-use decisions, we do not see that as foreclosing the EPA's interpretation.

Perhaps we would reach a different result if the TMDL in fact made land-use decisions diminishing state authority in

a significant way; we might then say that Congress delegated some authority over the definitions of technical terms in the Clean Water Act but not so much discretion as to usurp states' zoning powers. Indeed, the heart of Farm Bureau's federalism argument is that the TMDL impermissibly grants the EPA the authority to make land-use and zoning regulations. The challenge is long on swagger but short on specificity. That is likely because the TMDL's provisions that could be read to affect land use are either explicitly allowed by federal law or too generalized to supplant state zoning powers in any extraordinary way.

The TMDL comes closest to dictating a land-use regulation by allocating pollution limits to specific point sources. See Appendix R. As each of these sources is regulated by the National Pollutant Discharge Elimination System, see 33 U.S.C. § 1342, and the TMDL's allocations are not alleged to be inconsistent with that scheme, these waste load allocations do not trespass onto an area of traditional state regulation to some greater degree than the Clean Water Act anticipates.

The next most intrusive aspect of the TMDL is its allocations of limits to nonpoint-source *sectors*, as opposed to specific *sources*. The TMDL prescribes

daily Land Based [Load Allocation]s for specific nonpoint source *sectors*: agriculture, forest, nontidal atmospheric deposition, onsite septic, and urban. Land Based [Load Allocations] are presented as delivered load for each of the 92 impaired segments by jurisdiction and by nonpoint source *sector* for [total nitrogen, total phosphorous, and total suspended solids].

J.A. 1597 (emphases added); *see also* TMDL Appendix R. In presenting load allocations by sector, the TMDL gives the states flexibility in achieving the limits the EPA set—preserving state autonomy in land-use and zoning.

Further undermining the claim that the TMDL impermissibly takes over state power to regulate land is that the TMDL nowhere prescribes any particular *means* of pollution reduction to any individual point or nonpoint source. Instead, it contains pollution limits and allocations to be used as an informational tool used in connection with a *state's* efforts to regulate water pollution. This conclusion is confirmed by the Act, as it requires states to have a “continuing planning process,” which must include (but is not limited to) “total maximum daily load[s].” 33 U.S.C. § 1313(e)(1) & (3). It is further confirmed by the language of the TMDL, which provides that “[t]he cornerstone of the accountability framework is the jurisdictions’ development of [Watershed Improvement Plans], which serve as roadmaps for how and when a jurisdiction plans to meet its pollutant allocations under the TMDL,” J.A. 1113, and by the EPA’s repeated concessions that it will not undertake any enforcement action under the TMDL. Tr. of Oral Argument at 91:3, Oct. 4, 2012, *American Farm Bureau Fed’n v. EPA*, No. 11-cv-67 (M.D. Pa.), J.A. 1758; EPA Response Br. at 23.

Farm Bureau characterizes the TMDL as more than an informational tool by pointing to incentives for states to implement it. By virtue of 33 U.S.C. § 1313(e), the TMDL must be included in each state’s “continuing planning process,” something the states are ostensibly required to put in place.⁶ The sanction for failing to adopt an adequate

⁶ From the record before us, it is not clear that any Chesapeake Bay state has or will adopt a continuing planning process within the meaning of § 1313(e), or that such a

continuing planning process under § 1313(e) is that the state loses its authority to administer its portion of the National Pollution Discharge Elimination System. 33 U.S.C. § 1313(e)(2). Another means of incentivizing states to follow the TMDL involves overseeing their implementation of Watershed Improvement Plans. “If progress is insufficient, EPA will utilize contingencies to place additional controls on federally permitted sources of pollution . . . as well as target compliance and enforcement activities.” J.A. 1118. The EPA lays out in more detail what these compliance and enforcement activities may be in Section 7.2.4 of the TMDL; they include establishing finer-scale waste load allocations and load allocations (*i.e.*, more tightly overseeing states’ pollution control) and conditioning federal grants based on progress in implementing the Watershed Improvement Plans (*i.e.*, withholding money if progress is unsatisfactory). The allocations are not self-executing, and all the other enforcement actions concern administration of federal programs plainly within the EPA’s authority.

Despite these incentives, Farm Bureau does not argue that the “inducement offered by Congress” for the states to adopt and enforce the TMDL is “so coercive as to pass the point at which pressure turns into compulsion.” *South Dakota v. Dole*, 483 U.S. 203, 211 (1987) (internal quotation marks omitted). Because Farm Bureau does not say that the EPA coerced the states into accepting the TMDL and because it only obliquely affects land use regulations, we conclude that

process will include the TMDL, but the states’ Phase II Watershed Improvement Plans, which are to be implemented now that the TMDL has been published, may satisfy the statute’s requirements.

the TMDL does not prescribe land use rules that excessively intrude on traditional state authority.

Put another way, it is illogical to assert that the EPA usurps states' traditional land-use authority when it (1) makes no actual, identifiable, land-use rule and (2) proposes regulatory actions that are specifically allowed under federal law. Hence we fail to see how this case presents federalism concerns so significant as to require a "clear statement" from Congress called for in *SWANCC* before we prohibit the EPA's interpretation of the statute. When a statutory scheme clearly inserts the federal Government into an area of typical state authority, we may require a plain statement from Congress about the scope of the statute's applicability before upholding an agency's assertion of jurisdiction over an area (physical or legal) historically regulated by the states. But, as here, once an agency is operating in the weeds of a statute that obviously requires federal oversight of some state functions, we will not require subordinate clear statements of congressional intent every time an interpretation arguably varies the usual balance of responsibilities between federal and state sovereigns.

We add an important caveat: if an agency interprets a statute in a way that pushes a constitutional boundary (whether that boundary comes from the federal structure or a different constitutional principle), we may find that interpretation outside the scope of Congress's delegation if it does not clearly flow from the statutory text. That brings us to the next question. Does the EPA's interpretation of "total maximum daily load" push at the Constitution's outer bounds?

ii. Constitutional Avoidance

When the TMDL is implemented, some land will need to be used differently from the way it is now, and it is true that land use law is an area typically within the states' police power. At the same time, federal power over interstate waterways, "from the commencement of the [federal] government, has been exercised with the consent of all, and has been understood by all to be a commercial regulation." *Gibbons v. Ogden*, 22 U.S. (9 Wheat) 1, 190 (1824). And for at least a century, federal common law has governed disputes over interstate water pollution. *Arkansas v. Oklahoma*, 503 U.S. at 98 (citing *Missouri v. Illinois*, 200 U.S. 496 (1906), and *Georgia v. Tennessee Copper Co.*, 206 U.S. 230 (1907)).

Regulation of the channels of interstate commerce lies at the very core of Congress's commerce power. *E.g.*, *United States v. Lopez*, 514 U.S. 549, 558 (1995) ("[W]e have identified three broad categories of activity that Congress may regulate under its commerce power. First, Congress may regulate the use of the channels of interstate commerce." (citations omitted)); *Heart of Atlanta Motel, Inc. v. U.S.*, 379 U.S. 241, 256 (1964) ("[T]he authority of Congress to keep the channels of interstate commerce free from immoral and injurious uses has been frequently sustained, and is no longer open to question."). And there can be no serious question that the Chesapeake Bay is a channel of interstate commerce: it produces 500 million pounds of seafood per year, leads ships to many port towns (including Baltimore), and has an estimated economic value of more than one *trillion* dollars. EPA Response Br. at 4. Broadly speaking, then, the federal Government's traditional authority to regulate this part of the country is secure.

By contrast, in Clean Water Act cases where there were arguable Commerce Clause problems, the SWANCC

Court would not interpret the Act to confer federal jurisdiction over an abandoned, man-made sand and gravel pit absent a “clear statement” from Congress to that effect because such an interpretation raised serious constitutional concerns (that the Government had failed to identify an activity that substantially affected interstate commerce, 531 U.S. at 173), and the *Rapanos* plurality rejected the Corps’ interpretation of the “waters of the United States” to include wetlands near ditches that eventually drain into navigable waters because that understanding “presses the envelope of constitutional validity.” 547 U.S. at 738.

Moreover, in *Rapanos* it appears five justices had no constitutional concerns in any event. Justice Kennedy, who provided the fifth vote to vacate the Sixth Circuit’s judgment, concluded only that the Court of Appeals had not faithfully applied *SWANCC*. *Id.* at 759. He forcefully rejected the plurality’s reasoning, *id.* at 776 (“[T]he plurality’s opinion is inconsistent with the Act’s text, structure, and purpose.”), and asserted a broad theory of federal authority under the Commerce Clause:

Even assuming, then, that federal regulation of remote wetlands and nonnavigable waterways would raise a difficult Commerce Clause issue notwithstanding those waters’ aggregate effects on national water quality, but cf. *Wickard v. Filburn*, 317 U.S. 111 (1942); see also *infra*, at 2249–2250 [citing Justice Stevens’s dissent], the plurality’s reading is not responsive to this concern. As for States’ “responsibilities and rights,” [33 U.S.C.] § 1251(b), it is noteworthy that 33 States plus the District of Columbia have filed an *amici* brief in this litigation asserting that the Clean Water Act is

important to their own water policies.^[7] These *amici* note, among other things, that the Act protects downstream States from out-of-state pollution that they cannot themselves regulate.

Id at 777. Justice Stevens and the three other dissenters who joined him would have held that it was reasonable and

⁷ We recognize that private parties may rely on the Constitution's structural division of labor between states and the federal Government to argue that one has gone too far. *See, e.g., United States v. Morrison*, 529 U.S. 598, 654 (2000) (Souter, J. dissenting) ("Thirty-six [states] and the Commonwealth of Puerto Rico have filed an *amicus* brief in support of petitioners in these cases, and only one State has taken respondents' side. It is, then, not the least irony of these cases that the States will be forced to enjoy the new federalism whether they want it or not."). And in any event the rooting interests of the states (both those directly affected by the TMDL and others) are not one-sided here. None of the seven states within the Chesapeake Bay's watershed sued the EPA over this TMDL. Virginia, Maryland, Delaware, and the District of Columbia have filed briefs in support of the District Court's decision, while West Virginia has signed on to the *amici* brief of states that oppose the EPA's decision. The other states (Pennsylvania and New York) are on the sidelines, but local governments are involved: municipalities from both states have filed *amici* briefs in favor of the EPA; on the other hand, six Pennsylvania counties and one Delaware county have filed a brief in support of Farm Bureau. Last, 21 other states have filed an *amici* brief in support of Farm Bureau, relying primarily on federalism arguments.

constitutional for the Corps to include within the definition of “waters of the United States” wetlands that drain into navigable waters. *Id.* at 788.

Notwithstanding the constitutional concerns raised in those cases, *SWANCC* and *Rapanos* are easily distinguishable on the critical and obvious ground that we are not concerned here with a small intrastate area of wetland; we are dealing with North America’s largest estuary. Indeed, the *Rapanos* plurality approvingly quoted a previous case for the proposition that “[i]n view of the breadth of federal regulatory authority contemplated by the Act itself and the inherent difficulties of defining precise bounds to regulable waters, the Corps’ ecological judgment about the relationship between waters and their adjacent wetlands provides an adequate basis for a legal judgment that adjacent wetlands may be defined as waters under the Act.” *Id.* at 740–41 (quoting *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121, 134 (1985) (emphasis in *Rapanos*)). It is beyond debate that navigable-in-fact waters are regulable and that the Chesapeake Bay is navigable-in-fact. *SWANCC* and *Rapanos* are also distinguishable because no one here is challenging the EPA’s authority to set a total maximum daily load; rather, Farm Bureau challenges how the EPA is allowed to express the load and what it may consider in drafting the TMDL. And, although Justice Kennedy’s concurrence is Delphic on this point, it appears that in *Rapanos* five Justices had no constitutional concerns. For us, the key point is that, in terms of the conflict between state and federal regulatory authority, we are far removed from *SWANCC* and *Rapanos*.

Because the TMDL forms part of a plan to clean up a channel of interstate commerce, we have no constitutional concerns with the EPA’s interpretation of the statute.

5. Conclusion With Respect to Step One

“Total” is susceptible to multiple meanings. Interpreting “total maximum daily load” as requiring one number and nothing more is in tight tension with the Clean Water Act’s goal of providing a cooperative framework for states and the federal Government to work together to eliminate water pollution. The Act’s structure supports that TMDLs need to account for point and nonpoint sources, but the Act is silent on *how* to account for those sources. It is also silent on (1) whether the EPA in calculating a TMDL may consider and express the time frames within which it and the states will strive to achieve water quality standards and (2) the extent to which the EPA may consider and express whether a state will meet the goals it sets (the “reasonable assurance” requirement). Last, the APA prefers overt rather than covert reasoning by agencies. For these reasons, we conclude that the phrase “total maximum daily load” is ambiguous enough to allow the EPA to include the elements of the TMDL challenged here.

D. Chevron Step Two

We briefly summarize the reasoning from Step One that also supports the EPA’s Step Two argument (Farm Bureau merely repeats its Step One contentions at Step Two, so there is no need to dive too deep here). As noted above, “total” can mean “a sum of parts,” and interpreting “total” that way gives greater guidance to states in cleaning their waters, provides greater transparency to the public who may comment on a TMDL, and furthers the Act’s requirement that the TMDL account for both point and nonpoint sources. Moreover, expressing the allocation of pollution limits between the EPA-regulated point sources and state-regulated nonpoint sources furthers the Clean Water Act’s goal of

achieving water quality standards. Including deadlines in a TMDL furthers the Act's goal that the TMDL promptly achieve something beneficial (recall that the enacting Congress's goal was to have the Nation's waters clean by 1985), and the reasonable assurance requirement helps guide the EPA's discretion in determining whether to approve a TMDL or a state's mandatory "continuing planning process," which must include the TMDL, 33 U.S.C. § 1313(e), as it would surely be arbitrary or capricious for the EPA to approve a plan that a state is incapable of following.

In addition to the factors just discussed, at Step Two we may consider legislative history to the extent that it may clarify the policies framing the statute.⁸ And we must

⁸ In *United States v. Geiser*, 527 F.3d 288, 294 (3d Cir. 2008), we wrote "that legislative history should not be considered at *Chevron* step one." This statement is a well-considered precedent of our Court, and we adhere to it here.

There is an argument that *Geiser*'s language excising legislative history from Step One is too broad. It derives from discussions of how to construe *unambiguous* language. See *id.*, 527 F.3d at 293 (citing *Zuni Pub. Sch. Dist. 89 v. Dep't of Educ.*, 550 U.S. 81, 93 (2007); *Dep't of Hous. & Urban Dev. v. Rucker*, 535 U.S. 125, 132–33 (2002)). Legislative history is generally not used to assess whether the words of a statute are ambiguous or to interpret unambiguous words. See *Milner v. Dep't of Navy*, 131 S. Ct. 1259, 1267 (2011). But at Step One we consider (1) whether a statute is ambiguous, and, if so, (2) whether the agency's interpretation falls within the scope of the ambiguity and (3) whether the ambiguity signifies a congressional delegation. See *supra* Part IV.A (discussing content of *Chevron* inquiry); *United States v. Home Concrete & Supply, LLC*, 132 S. Ct. 1836,

1844 (2012) (opinion of Breyer, J.) (concluding despite “linguistic ambiguity” that Congress had not “delegated gap-filling power to the agency”). Legislative history can be helpful in the latter inquiries. If, for example, a committee report notes that Congress has left a gap for an agency to fill, one might question whether that would be relevant to a judge who considers the use of legislative history to be permissible. See, e.g., H.R. Rep. 92-911 at 93 (“The use of the word ‘generally’ is intended to provide the Administrator with some discretion . . .”).

Geiser’s holding on when we may consult legislative history in construing statutes is arguably in tension with the Supreme Court’s general practice of declining to make interpretive methodologies binding (as academics put it, the Court typically avoids “methodological *stare decisis*”), particularly in the context of legislative history. See Evan J. Criddle & Glen Staszewski, *Against Methodological Stare Decisis*, 102 Geo. L.J. 1573, 1576 (2014) (“[F]ederal courts do not treat interpretive methodology as a traditional form of ‘law,’ and federal judges are therefore permitted to use whichever interpretive methods they prefer to resolve each particular case.”); Abbe R. Gluck, *The States as Laboratories of Statutory Interpretation: Methodological Consensus and the New Modified Textualism*, 119 Yale L.J. 1750, 1765 (2010) (“Indeed, the Court does not give *stare decisis* effect to any statements of statutory interpretation methodology.” (emphasis in original)); Jordan Wilder Connors, *Treating Like Subdecisions Alike: The Scope of Stare Decisis as Applied to Judicial Methodology*, 108 Colum. L. Rev. 681, 707 (2008); Jonathan R. Siegel, *The Polymorphic Principle and the Judicial Role in Statutory Interpretation*, 84 Tex. L. Rev. 339, 389 (2005); Nicholas Quinn Rosenkranz, *Federal Rules of*

consider whether the agency made “a reasonable policy choice” in its interpretation. *Brand X*, 545 U.S. at 997 (quoting *Chevron*, 467 U.S. at 845).

Although the parties do not cite any pre-enactment legislative history that describes the meaning of “total maximum daily load,” one committee report, by the House Public Works Committee, commented in discussing draft legislation that “[a] maximum daily load shall also be developed by a State for all waters within its boundaries which are not identified as requiring more stringent effluent limitations to meet water quality standards. The committee recognizes that this is a time-consuming and difficult task.” H.R. Rep. No. 92-911, at 106 (1972). This is the only discussion in the pre-enactment legislative history of the TMDL requirement, and it provides no help beyond recognizing that developing a TMDL is “time consuming and difficult.” If anything, this undercuts the idea that a TMDL is just a number, but it offers only weak support at best for the EPA.

Post-enactment developments are more informative. Specifically, in 1987, after the EPA had defined “total maximum daily load” as the sum of waste load allocations for point sources and load allocations for nonpoint sources, Congress added § 1313(d)(4)(A) & (B) governing the revision of effluent limitations “based on a total maximum daily load or *other waste load allocation* established under

Statutory Interpretation, 115 Harv. L. Rev. 2085, 2144–45 (2002). However, as whether we consider legislative history at Step One or Step Two does not affect the outcome of this case, we have no occasion to explore further the contours of this debate. We follow the instruction in *Geiser* and turn to the relevant legislative history at *Chevron*’s second step.

this section.” P.L. 100-4 § 404(b) (Feb. 4, 1987) (emphasis added). The word “other” suggests that a TMDL contains a waste load allocation. Interestingly, § 1313 makes no reference to a “waste load allocation”; that phrase occurs only in the EPA’s regulations. The EPA therefore has a strong argument that Congress not only agreed to its definition of TMDL as the sum of load and waste load allocations, but also affirmatively incorporated the EPA’s rule in an addition to the statute.

A second development in 1987 was that Congress ratified the Chesapeake Bay Program, a voluntary partnership among several watershed states and the EPA. *See* 33 U.S.C. § 1267. The 1987 legislation supported cleanup efforts by a program of grants and study; in 2000 Congress added § 1267(g), which directed the EPA to “ensure that management plans are developed and implementation is begun” to meet the goals of the Chesapeake Bay Agreement. Although § 1267 does not add to the EPA’s regulatory authority, it strongly suggests that cleaning up the Bay is a priority for Congress and that it did not have a problem with the EPA’s role in developing goals for the watershed even though the EPA had promulgated its TMDL rules long before § 1267 was added to the U.S. Code.

Farm Bureau claims that Congress, far from acquiescing to the regulatory definitions of the EPA, has specifically rejected its “reasonable assurance” requirement by blocking implementation of an EPA rule in 2000. 68 Fed. Reg. 13,608–09 (Mar. 19, 2003). As the EPA convincingly counters, the entire rule was blocked for just one year, contained dozens of changes to the EPA’s Clean Water Act regulations (which included the reasonable assurance requirement), and was ultimately withdrawn in its entirety in 2003. Farm Bureau gives no reason to think that Congress

blocked the rule *because* of the reasonable assurance requirement.

Although legislative history in general and “congressional acquiescence” in particular are controversial legal methods, to the extent they have the power to persuade, they provide support to the EPA that it has reasonably carried out Congress’s directives in administering the TMDL section of the Clean Water Act.

More to the point, even Farm Bureau “agree[s] with EPA that developing source limits, assurances, and deadlines is useful.” Reply Br. at 2. Although Farm Bureau claims that the Chesapeake Bay will be cleaned up without EPA intervention, the contention defies common sense and experience. The Clean Water Act sought to eliminate water pollution by 1985, but by 2010 62% of the Bay had insufficient oxygen to support aquatic life, and only 18% of the Bay had acceptable water clarity. NGO Response Br. at 6.

In an important article on the allocation of property rights in land, Robert Ellickson distinguished among small, medium, and large events (using, he acknowledged tongue-in-cheek, “highly sophisticated adjectives”). Robert C. Ellickson, *Property in Land*, 102 Yale L.J. 1315, 1325 (1993). “Large events,” he noted, “are inherently difficult to regulate. Identifying the institutions that govern them best—or, more bluntly, least badly—should be an exercise in experience, not logic.” *Id.* at 1335. The drainage of 64,000 square miles of land into the continent’s largest estuary qualifies as a large event, and it has proved difficult to regulate. Our experience in state regulation of water pollution gave environmentalists poster material in the 1969 burning of the Cuyahoga River, the consequence of a classic “tragedy of the commons,” which occurs when society fails to

create incentives to use a common resource responsibly. See Garrett Hardin, *The Tragedy of the Commons*, 162 Science 1243, 1244 (1968). Producers of industrial waste used the Cuyahoga River to diffuse oil and other chemicals—and thus the river “ooze[d] rather than flow[ed]” and a person who fell in would “not drown but decay”—until the waste caught fire. *Time*, America’s Sewage System and the Price of Optimism (Aug. 1, 1969). In response to that fire and to the general degradation of American water that followed the post-war industrial boom, Congress determined that the EPA should have a leadership role in coordinating among states to restore the Nation’s waters to something approaching their natural state. See 33 U.S.C. § 1251. The EPA has carried out that duty by publishing approximately 61,000 TMDLs with a level of detail commensurate with the challenge of cleaning and maintaining our waters. The EPA’s approach makes sense, as even Farm Bureau acknowledges, and therefore represents a reasonable policy choice at *Chevron*’s second step.

Farm Bureau’s reading of the Act would stymie the EPA’s ability to coordinate among all the competing possible uses of the resources that affect the Bay. At best, it would shift the burden of meeting water quality standards to point source polluters, but regulating them alone would not result in a clean Bay. See *supra* Part IV.B.3.i (explaining how 33 U.S.C. § 1313(d) requires “impaired waters” to be listed only when point source regulation is insufficient to meet water quality standards). As the Supreme Court has admonished in the water-pollution context, “We cannot, in these circumstances, conclude that Congress has given authority inadequate to achieve with reasonable effectiveness the purposes for which it has acted.” *E.I. Du Pont De Nemours v. Train*, 430 U.S. 112, 132 (1977) (quoting *Permian Basin Area Rate Cases*, 390 U.S. 747, 777 (1968)). Establishing a comprehensive, watershed-wide TMDL—complete with allocations among different kinds of sources, a timetable, and

reasonable assurance that it will actually be implemented—is reasonable and reflects a legitimate policy choice by the agency in administering a less-than-clear statute. Therefore we uphold these decisions at *Chevron* Step Two.

V. Conclusion

Water pollution in the Chesapeake Bay is a complex problem currently affecting at least 17,000,000 people (with more to come). Any solution to it will result in winners and losers. To judge from the arguments and the *amici* briefs filed in this case, the winners are environmental groups, the states that border the Bay, tourists, fishermen, municipal waste water treatment works, and urban centers. The losers are rural counties with farming operations, nonpoint source polluters, the agricultural industry, and those states that would prefer a lighter touch from the EPA. Congress made a judgment in the Clean Water Act that the states and the EPA could, working together, best allocate the benefits and burdens of lowering pollution. The Chesapeake Bay TMDL will require sacrifice by many, but that is a consequence of the tremendous effort it will take to restore health to the Bay—to make it once again a part of our “land of living,” Robert Frost, *The Gift Outright* line 10—a goal our elected representatives have repeatedly endorsed. Farm Bureau’s arguments to the contrary are unpersuasive, and thus we affirm the careful and thorough opinion of the District Court.