

RECORD NO. 13-4079

In The
United States Court of Appeals
For The Third Circuit

AMERICAN FARM BUREAU FEDERATION, et al.,
Plaintiffs – Appellants,

v.

U.S. ENVIRONMENTAL PROTECTION AGENCY,
Defendants – Appellees.

**On Appeal from the United States District Court for the Middle District of
Pennsylvania, No. 1:11-cv-00067 (Hon. Sylvia H. Rambo)**

**BRIEF OF PLAINTIFFS-APPELLANTS AMERICAN FARM BUREAU
FEDERATION, NATIONAL ASSOCIATION OF HOME BUILDERS, NATIONAL
CORN GROWERS ASSOCIATION, NATIONAL PORK PRODUCERS COUNCIL,
PENNSYLVANIA FARM BUREAU, THE FERTILIZER INSTITUTE, AND U.S.
POULTRY & EGG ASSOCIATION AND JOINT APPENDIX
VOLUME I OF V
(Pages 1 – 105)**

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RULE 26.1 DISCLOSURE STATEMENT

Pursuant to Federal Rule of Appellate Procedure 26.1 and L.A.R. 26.1, Plaintiffs-Appellants make the following disclosures:

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National Association of Home Builders is a non-profit corporation. It has no parent corporations, and no publicly held company has a 10% or greater ownership interest in National Association of Home Builders.

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TABLE OF ABBREVIATIONS

Parties

CBF	Chesapeake Bay Foundation; Citizens for Pennsylvania's Future; Defenders of Wildlife; Jefferson County Public Service District; Midshore Riverkeeper Conservancy; and National Wildlife Federation
EPA	U.S. Environmental Protection Agency
Municipal Groups	National Association of Clean Water Agencies; Maryland Association of Municipal Wastewater Agencies, Inc.; Virginia Association of Municipal Wastewater Agencies, Inc.; Pennsylvania Municipal Authorities Association
Plaintiffs-Appellants	American Farm Bureau Federation; National Association of Home Builders; National Corn Growers Association; National Pork Producers Council; Pennsylvania Farm Bureau; The Fertilizer Institute; and U.S. Poultry & Egg Association

Defined Terms

APA	Administrative Procedure Act, 5 U.S.C. § 551 <i>et seq.</i>
Bay	Chesapeake Bay
Bay TMDL	Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus, and Sediment (Dec. 29, 2010)
CWA	Clean Water Act, 33 U.S.C. § 1251 <i>et seq.</i>
JA__	The Joint Appendix at page __

NPDES National Pollutant Discharge Elimination
System

TMDL Total Maximum Daily Load

JURISDICTIONAL STATEMENT

The district court had jurisdiction under 28 U.S.C. § 1331 because this case arises under the federal Clean Water Act (“CWA”), 33 U.S.C. § 1251 *et seq.* On September 13, 2013, the district court denied Plaintiffs-Appellants’ motion for summary judgment and granted the Government’s and Municipal Associations’ cross-motions for summary judgment, and it entered judgment against Plaintiffs-Appellants on all claims. Joint Appendix (“JA”) 5, 104-05. Plaintiffs-Appellants timely filed a notice of appeal on October 7, 2013. JA1. This Court has jurisdiction over the district court’s final order on summary judgment. 28 U.S.C. § 1291.

STATEMENT OF THE ISSUES

A foundational principle of the CWA is that states have the “primary responsibilities and rights” to address water pollution and “plan the development and use . . . of land and water resources.” 33 U.S.C. § 1251(b). Congress reserved these responsibilities and rights for the states, and the Act clearly explains that, unless Congress “expressly provided,” nothing in the statute shall “be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to [their] waters.” *Id.* § 1370. Accordingly, the Act must be interpreted in the context of this cooperative federalism framework.

Under CWA Section 303, a state must establish water quality standards for the navigable waters within its borders. *See id.* § 1313(c). If a particular water body does not attain an applicable water quality standard through specified technology-based pollutant limits, *see id.* § 1313(d)(1)(A), the state must establish a “total maximum daily load” for that water body “at a level necessary to implement the applicable water quality standards.” *Id.* § 1313(d)(1)(C). That total load, or TMDL, thus represents the maximum amount of a particular pollutant that could be added (in a day) to the water body and still meet water quality standards. If a state fails to properly set a TMDL, Section 303 authorizes EPA to establish the total load at the appropriate level.

The specific issues presented in this appeal are:

Whether EPA has the authority, as part of establishing a “total maximum daily load” for nutrients and sediment under CWA Section 303(d), to:

1. establish pollutant limits for individual sources and source sectors (JA1703, 47-65, 68-72),
2. require states to provide “reasonable assurance” that such limits will be achieved (JA1703-04, 65-68), and
3. establish deadlines for states to put control measures and practices in place that are designed to achieve such limits (JA1704, 72-73).

INTRODUCTION

This case is about whether the CWA authorizes EPA to make such local decisions as: whether particular lands can be farmed or developed, and how; the amounts of fertilizer that may be applied to, or sediment that may be washed off from, particular farms, suburbs, land development projects, or city streets; and how to allocate the burdens of achieving water quality goals among municipal sewers, stormwater systems, septic systems, construction and development activities, farming, and other sources. The CWA preserved the states' authority to make these local decisions. *See Hess v. Port Auth. Trans-Hudson Corp.*, 513 U.S. 30, 44 (1994) ("regulation of land use [is] a function traditionally performed by local governments"). The challenged Bay TMDL would reverse Congress's allocation of these powers by assigning them to EPA. It is this aspect of the Bay TMDL that we are challenging here.

STATEMENT OF FACTS AND STATEMENT OF THE CASE

I. Chesapeake Bay Improvement Efforts

Plaintiffs-Appellants represent farmers and developers who have long been applying water quality protection measures in the Chesapeake Bay region, including more efficient use of fertilizer and beneficial management practices such as use of cover crops, soil stabilization, and buffer zones that are reducing nutrient runoff. *See* JA894, 939-44, 959. These efforts have produced significant results.

The Natural Resources Conservation Service of the U.S. Department of Agriculture recently found that farmers have widely adopted conservation practices on the Chesapeake Bay region's 4.4 million acres of cropland, including implementing erosion control practices on about 96% of the cropland acres in production in the watershed during the 2003 to 2006 period. *See* JA627-28.

According to EPA's own data, since 1985 the agricultural community has significantly reduced loading to the Chesapeake Bay for nitrogen (by over 27%), for phosphorus (by over 21%), and for sediment (by over 24%).¹ *See* JA622-24.

Home builders and developers have also undertaken pollution control efforts for many years, including erosion and sediment control practices such as road stabilization, sediment basins, storm drain inlet protection, dikes and diversions, and vegetative cover in accordance with state nonpoint source management programs implementing, among other things, CWA Section 319.²

¹ Although nitrogen, phosphorus, and sediment are "pollutants" as defined in the CWA, *see* 33 U.S.C. § 1362(6), these are naturally occurring substances and, in the case of nitrogen and phosphorus, are essential to plant growth (and all life).

² *See, e.g.*, Va. Dep't of Env'tl. Quality, Virginia Erosion & Sediment Control Handbook (3d ed. 1992), *available at* <http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/Publications/ESCHandbook.aspx>; Md. Dep't of the Env't, 1994 Maryland Standards & Specifications for Soil Erosion & Sediment Control, *available at* <http://pgscd.org/PDFs/MD%20ESS%201994ErosionSed.pdf>; *see also infra* at 21, 41-42 for a discussion of CWA Section 319.

A. Prior To EPA's Bay TMDL, States And Stakeholders Were Making Progress To Improve Bay Water Quality

Before EPA established the Bay TMDL, states had taken significant steps to protect the Bay water quality. The original Chesapeake Bay Agreement was signed in December 1983 by the Commonwealths of Virginia and Pennsylvania, the State of Maryland, the District of Columbia, and EPA. *See* JA1156. The States of New York, Delaware, and West Virginia are not signatories to the Chesapeake Bay Agreement, but are partners. As partners, these jurisdictions signed a memorandum of understanding agreeing to work cooperatively to achieve agreed upon nutrient and sediment reduction targets. *See* JA1158.

In 2003, EPA issued new guidance for the development of water quality standards for the Chesapeake Bay. *See* JA1188. Maryland, Virginia, the District of Columbia, and Delaware then adopted new water quality standards for the tidal waters of the Chesapeake Bay incorporating EPA's criteria, and the seven watershed jurisdictions cooperatively allocated pollutant loadings among themselves. *See id.* Between 2004 and 2006, all seven watershed jurisdictions announced the goal of achieving water quality standards by implementing "Tributary Strategies" the states had developed to achieve this new goal. *See* JA1159.

The seven jurisdictions' Tributary Strategies outlined river basin-specific implementation activities to reduce nitrogen, phosphorus, and sediment pollution

to help the Chesapeake Bay meet water quality goals. *See id.* As part of these efforts, states adopted measures such as farm nutrient management programs, regulation of concentrated animal feeding operations, preservation of large tracts of forested land, planting of thousands of acres of stream buffers, and cost-share, tax credit, or other funding to promote streamside livestock exclusion fencing, riparian vegetation, and cover crop planting. *See* JA905, 939-44. EPA's modeling indicated that, when implemented, these Tributary Strategies would achieve annual pollutant loadings throughout the watershed (190.9 million pounds for nitrogen, 14.36 million pounds for phosphorus, and 6.47 billion pounds for sediment) comparable to the loadings later called for in the Bay TMDL (185.9 million pounds for nitrogen, 12.5 million pounds for phosphorus, and 6.45 billion pounds for sediment). *Compare* JA562-64 *with* JA1106. These pre-Bay TMDL measures were initiated through state action with EPA guidance and leadership, and with active participation from stakeholders, including farmers.

These steps had begun to generate meaningful improvements in water quality within the Bay, and improvement would have continued through implementation of the states' Tributary Strategies in the absence of EPA's Bay TMDL. *See* JA622-24. Even the best measures will not show instant results because there are *substantial* lag times before control measures along tributaries or in upland areas are reflected in Bay water quality. During development of the Bay

TMDL, EPA acknowledged the existence of lag time, but did not factor it into its Bay TMDL models. JA1626. A recent U.S. Geological Service survey found that, because of the hydrogeology of the Bay region, lag times of “years to decades” exist between “implementing improved pollution-management practices on the ground and seeing the improved water quality.”³ According to this survey, the “nutrient management practices, implemented over the past decade especially, have begun to work and, thus, could continue to work in the future as they are expanded.”⁴ EPA has itself acknowledged a large decline in nitrogen loads and a significant decline in phosphorus loads within the Bay between 1985 and 2009. JA622-24 (nitrogen loads decreased from 308.0 to 243.3 million lbs/yr; phosphorus loads decreased from 23.96 to 16.31 million lbs/yr; sediment loads decreased from 9.64 to 7.98 billion lbs/yr). The steps taken by the Bay states and our members, therefore, were having—and would continue to have—a positive effect on Bay water quality in the absence of the Bay TMDL.

³ Ward E. Sanford & Jason P. Pope, United States Geological Survey, *Quantifying Groundwater’s Role in Delaying Improvements to Chesapeake Bay Water Quality*, Environmental Science & Technology (Oct. 23, 2013), at 13330 (attached as Exhibit 1).

⁴ *Id.* at 13336.

B. The Bay TMDL Restricts State And Local Control Over Land Use And Economic Development

To meet a deadline in a settlement agreement with the Chesapeake Bay Foundation and others, EPA issued the Bay TMDL on December 29, 2010.⁵ JA1172. The Bay TMDL sets “watershed limits”⁶ of 185.9 million pounds of nitrogen, 12.5 million pounds of phosphorus, and 6.45 billion pounds of sediment per year. *See* JA1106. It mandates that all pollution control measures to achieve these limits be in place by 2025, with at least 60% of the measures in place by 2017. *Id.*

Although EPA called its action a “total maximum daily load,” the Bay TMDL goes far beyond establishing the total amounts of nitrogen, phosphorus, and

⁵ The Bay TMDL was developed in a rushed and at times haphazard manner. For example, the Chesapeake Bay Program’s Scientific and Technical Advisory Committee (“STAC”) – the independent scientific peer review committee used by EPA to review the TMDL models – warned EPA that its watershed model documentation needed to be completed before the scientific and user community could adequately review the watershed model. JA308-09. STAC complained that many of the watershed model documents EPA provided to it for review “were in draft form, with key components missing or incomplete.” JA302. As a result, STAC could not answer some of the core questions posed by EPA, such as whether “the model structure, dynamics, and calibration [were] sufficient for management purposes at the regional scale[.]” JA304. Despite STAC’s warnings, many other problems with the Bay TMDL’s modeling development, and the TMDL’s inherent complexity, EPA allowed the public only 45 days to review the 370-page Draft TMDL document itself, 1,672 pages of appendices, and poorly organized and incomplete technical support material that is referenced throughout the Draft TMDL. *See* 75 Fed. Reg. 57,776 (Sept. 22, 2010).

⁶ These limits represent the aggregate amount of pollutants that can originate from all sources throughout the watershed.

sediment that can be loaded into the Chesapeake Bay to achieve water quality standards.⁷ It also imposes detailed pollutant limits on source categories and even on individual sources throughout the 64,000-square mile Bay watershed. EPA established annual and daily “waste load allocations” for specific “point source” (such as a pipe outfall)⁸ sectors (regulated agriculture, regulated stormwater, and wastewater) and for 478 individual permitted facilities throughout the seven jurisdictions. JA1400-33, 1596-97. EPA also established annual and daily “load allocations” for certain “nonpoint source”⁹ sectors (“agriculture, forest, nontidal atmospheric deposition, onsite septic, and urban”) within each jurisdiction. *See id.*

The allocations in the Bay TMDL originated from “watershed implementation plans” submitted to EPA by the Bay states. EPA required the states to submit such plans and to include, among other things, pollutant allocations for individual facilities and source sectors and “reasonable assurances” that the allocated source limits will be achieved. *See* JA1367-69. To provide “reasonable assurance,” the states had to revise their implementation plans to

⁷ The entire Bay comprises 92 tidal segments, each of which is treated as a receiving water in the Bay TMDL. Thus, EPA set 92 total loads for each of the three pollutants at issue, essentially setting 276 “total” loads. *See* JA1147, 1400-15.

⁸ *See* Section II *infra* for an explanation of this term and examples of what types of sources are included.

⁹ *See* Section II *infra* for an explanation of this term and examples of what types of sources are included.

include, for example, commitments to: upgrade wastewater treatment plants; increase enforcement and compliance initiatives for agriculture; and extend regulatory programs to nonpoint sources if needed. *See* JA1375.

The record demonstrates that EPA purported to disapprove the state implementation plans because “none of [them] . . . provided sufficient reasonable assurance that programs would be implemented to achieve the necessary pollutant load reductions.” JA601. EPA demanded, often over protest, that the states revise their plans to EPA’s satisfaction. *See, e.g.*, JA616-18, 598-99 (summarizing EPA’s evaluation and “backstop” revision of draft plans); JA898, 902 (New York’s objections); JA905-08 (Pennsylvania’s objections); JA557-60 (Virginia’s objections); JA903-04 (West Virginia’s objections). It also demonstrates that EPA unilaterally changed some states’ revised plans because it remained unsatisfied. JA1388, 1392 (EPA’s “backstop” changes to revised plans). Ultimately, EPA took the allocations from the state plans and established them as part of the Bay TMDL, declaring that any changes to those allocations require EPA approval. *See* JA1369-69, 1400-33, 1596-97, 1766-67. EPA effectively took portions of the state “plans” and made them federal requirements.

EPA also claimed the authority to create new, more specific limits on sources. Specifically, the Bay TMDL states that EPA may establish even “finer-scale” source limits for point and nonpoint sources than those proposed by the

states in their implementation plans to ensure that the states meet the deadlines in the Bay TMDL. JA1366.

Despite recognizing that “there are limitless combinations of loadings” that may achieve the total load, JA576, EPA not only added one particular array of allocations to its TMDL, but asserted that any revisions to EPA’s allocations require EPA approval. *See* JA1437-38. Additionally, EPA required that states provide “reasonable assurance” that the allocations will, in fact, be achieved. JA1355-56. Finally, EPA set deadlines for the states to put control measures and practices in place on the ground to achieve such limits, backed by specific threats of future EPA action. *See id.* The Bay TMDL establishes an implementation timeline for “ensur[ing] that all pollution control measures needed to fully restore the Bay and its tidal rivers are in place by 2025, with at least 60 percent of the actions completed by 2017.” JA1106.

EPA did not consider cost or economic impacts—either on individual sources or sectors or in the aggregate—when establishing the Bay TMDL. When EPA issued the draft TMDL for public comment, it did not even mention these impacts, *see* 76 Fed. Reg. 549 (Jan. 5, 2011), nor does the rulemaking docket for the TMDL contain any sort of detailed cost or economic impact analysis.¹⁰

¹⁰ The full contents of this docket are available for public access at <http://www.regulations.gov/#!docketBrowser;rpp=25;po=0;D=EPA-R03-OW-2010-0736>.

Likewise, there is no consideration of these impacts anywhere in the Final TMDL or its many, voluminous appendices.

The requirements in the Bay TMDL are federal, not state actions. By adding pollutant allocations to the TMDL, EPA has claimed the last word on land use decisions such as how much nitrogen, phosphorus, and sediment can come from a particular wastewater treatment plant in Pennsylvania, or how much can come from agriculture, forestry, or construction in Virginia. And EPA's threat to establish "finer-scale" limits for both point and nonpoint sources in the event that states do not meet the Bay TMDL deadlines resolves any doubt that EPA has asserted that it, not the states, has the last word on these types of land use decisions. Under EPA's view, it can dictate how much nitrogen, phosphorus, and sediment come from a *particular parcel of land* anywhere in the Chesapeake Bay watershed, even if achieving that limit is possible only by ceasing agricultural use or banning development.

The federal pollution allocations thus control state and local economic development planning and local land use. As a result of the Bay TMDL, farmland must be taken out of production. *See, e.g.*, JA900 (According to New York, "[r]eliance on source reductions means that farms will go out of business in order for NY to meet its proposed allocation."). Through the Bay TMDL, farming practices themselves become federalized. *See, e.g.*, JA908 ("Pennsylvania

disagrees with requirements for predetermined list of specific [best management practices] on all types of farming operations.”). Communities must pay more for wastewater treatment. *See, e.g.*, JA865, 883, 885, 946. Housing development must be altered or restricted. *See, e.g.*, JA909-10, 957-58. This federal action will force tradeoffs among agriculture, forestry, housing development, sewage water treatment facilities, and other sectors and sources. All of these difficult choices no longer rest with state and local officials because through the Bay TMDL, EPA has seized the final say on these matters. *See* JA1367-69 (changes to the Bay TMDL, such as to specific allocations, require EPA approval).

Though EPA has made much of the fact that no Bay watershed state has filed suit challenging the Bay TMDL, many of these states resisted EPA’s encroachment into their traditional areas of responsibility. New York, Pennsylvania, and West Virginia objected to the assumption of federal control over source limits. JA898, 902 (New York stated that it “cannot agree to the allocations in this Draft TMDL” and that “EPA’s determination to assert sole authority to make these complicated decisions *for* New York, and over New York’s objections, appears to be well beyond the providence of EPA’s authority”); JA333 (“New York has not agreed to participate in the legally binding TMDL.”); JA1004 (“Pennsylvania does not . . . agree with the approach outlined in EPA’s Draft Chesapeake Bay TMDL. . . . Pennsylvania objected to the imposition of ‘federal

backstop measures’ in the Draft Bay TMDL, including the establishment of [detailed allocations to point and nonpoint sources].”); JA903-04 (West Virginia wrote, *inter alia*, “we feel the need to provide formal comment and adamantly oppose the imposition by EPA of the backstop TMDL”); JA855 (West Virginia “[d]esperately does not want the federal backstops.”); JA557-60 (letter from Governor McDonnell to EPA expressing Virginia’s numerous concerns with the legality of the TMDL, including its “reasonable assurance” requirements); JA954 (“The Final TMDL should not include any federal Backstops.”). EPA overrode these objections.

EPA has called the Bay TMDL decisions “collaborative,” but EPA made it clear to the states that the TMDL was EPA’s action, EPA’s decision. Minutes from an April 29, 2010 meeting provide, *inter alia*, that “Chair Shawn Garvin wanted to reiterate that this was EPA’s plan, and that there was nothing on the table for a vote. EPA would be taking jurisdiction input, but ultimately it was EPA’s responsibility to publish the TMDL by December 2010.” JA552.

II. The Clean Water Act Framework

The CWA leaves the task of controlling water pollution largely to the states: it expressly recognizes, preserves, and protects “the primary responsibilities and rights of *States* to prevent, reduce, and eliminate pollution.” 33 U.S.C. § 1251(b) (emphasis added). It also specifically preserves the primary rights of states “to

plan the development and use . . . of land and water resources.” *Id.* The Act also bars any interpretation of its provisions that would “impair [] or in any manner affect[] any right or jurisdiction of the *States* with respect to the waters (including boundary waters) of such States[,]” except as otherwise “expressly provided” by the statute. *Id.* § 1370. Cooperative federalism is thus a foundational principle of the CWA.

Throughout the CWA, Congress drew an important distinction between “point source” and “nonpoint source” pollution, leaving states with the exclusive authority to regulate the latter. A “point source” is “any discernible, confined and discrete conveyance . . . from which pollutants are or may be discharged.” *Id.* § 1362(14). Point sources generally discharge collected fluids from pipes or similar conveyances. For example, municipal and industrial wastewater treatment plants are point sources. Some agricultural operations (*e.g.*, large animal feeding operations) can be point sources, but Congress deliberately excluded “agricultural stormwater discharges and return flows from irrigated agriculture” from the definition of “point source.” *Id.*

Nonpoint sources are not defined in the CWA, but generally include any source of water pollution other than a point source discharge. *See Nat’l Wildlife Fed’n v. Gorsuch*, 693 F.2d 156, 165-66 (D.C. Cir. 1982). They often involve land and soil disturbing activity (*e.g.*, plowing, grading, tree harvesting) or products

applied to land (*e.g.*, the spraying of pesticides or the application of fertilizer) that result in pollutants being carried in diffuse runoff resulting from precipitation and entering a water body that is subject to CWA jurisdiction. Other examples include stormwater runoff from agricultural and forest lands, atmospheric deposition of pollutants from sources like power plants (about 30% of the Bay's total nitrogen load comes from atmospheric deposition),¹¹ and pollutants that wash off from highway and road surfaces during storms. Of importance here, Congress gave EPA no authority to directly regulate nonpoint sources or to require state regulation of those sources. States may choose to regulate them, but "nothing in the CWA demands that a state adopt a regulatory system for nonpoint sources." *Defenders of Wildlife v. EPA*, 415 F.3d 1121, 1124 (10th Cir. 2005).

A. Adoption Of Water Quality Standards

The CWA places primary authority with each state to adopt water quality standards for its own water bodies. 33 U.S.C. § 1313(c)(2)(A). Each state must designate one or more uses for each of its water bodies (such as recreation, drinking water supply, aquatic life uses, and agricultural or industrial uses) and

¹¹ Nitrogen in the air that falls directly on the surface of the Chesapeake Bay or throughout the Bay watershed accounts for over 30 percent of the Bay's total nitrogen load, according to the EPA. JA1245. A large percentage of the nitrogen deposited into the Bay will be addressed through various air programs. *See* JA1325 (EPA acknowledges that significant reductions will come from Clean Air Act regulations and programs).

identify water quality criteria (characteristics) necessary to protect these uses. *Id.* § 1313(c)(2)(A); 40 C.F.R. §§ 131.10, 131.11. State-promulgated water quality standards are subject to EPA review and approval to ensure that they meet the CWA’s requirements. 33 U.S.C. § 1313(c)(2)-(3). Each state must also, at least once every three years, review its water quality standards. *See id.* § 1313(c)(1).

EPA has authority under the Act to “step in and promulgate water quality standards itself” under conditions specified by Congress. *Am. Paper Inst., Inc. v. EPA*, 996 F.2d 346, 349 (D.C. Cir. 1993). EPA may do so only if “(1) it determines that a state’s proposed new or revised standard does not measure up to CWA requirements and the state refuses to accept EPA-proposed revisions to the standard or (2) a state does not act to promulgate or update a standard but, in the EPA’s view, a new or revised standard is necessary to meet CWA muster.” *Id.* (citing 33 U.S.C. § 1313(c)(3)-(4)).

B. Listing Impaired Waters And Establishing TMDLs For Those Waters

CWA section 303(d) requires each state to (i) identify those waters within its boundaries for which technology-based limitations on point source discharges are not stringent enough to implement the standards “applicable to such waters.” 33 U.S.C. § 1313(d)(1)(A). For each listed (“impaired”) water, the state must establish a “total maximum daily load” for pollutants that EPA identifies as

“suitable for such calculation.” *Id.* § 1313(d)(1)(C).¹² The Act directs that a TMDL be established “at a level necessary to implement the applicable water quality standards.” *Id.*

Section 303 does not authorize setting limits for either point or nonpoint sources: the authority to set source limits resides elsewhere. For point sources, the CWA authorizes states to administer the Section 402 National Pollutant Discharge Elimination System (“NPDES”) permitting program. Where states do so, they have the primary authority to establish source limits in the first instance, subject to EPA authority to object to a state’s proposed permit. *See id.* §§ 1342(b), (d). For nonpoint sources, Congress reserved exclusive authority for states to set source limits. *See infra* at 20-22. EPA has no authority to override them.

By the terms of the statute, a TMDL is a calculation—a number—which EPA acknowledges is meant to be an “informational tool.” JA1167 (quoting *Pronsolino v. Nastri*, 291 F.3d 1123, 1129 (9th Cir. 2002)). The statute says nothing at all about allocations. EPA regulations nevertheless define a TMDL as the “*sum*” of allocations of the total load given to point sources (“wasteload allocations”) and nonpoint sources (“load allocations”). *See* 40 C.F.R. § 130.2.

¹² EPA has long held the view that “[a]ll pollutants, under the proper technical conditions, are suitable for the calculation of [TMDLs].” 43 Fed. Reg. 60,662, 60,665 (Dec. 28, 1978).

Like water quality standards, state lists of impaired waters and TMDLs are subject to EPA review and approval. 33 U.S.C. § 1313(d)(2). If, for example, EPA disapproves a TMDL, or if a state fails to establish a required TMDL, EPA has 30 days to establish one. *Id.*

Congress did not give EPA comparable authority over what happens *after* a TMDL is established. Instead, the CWA requires that states have a “continuing planning process” approved by EPA that seeks to serve the purposes of the statute. *See id.* § 1313(e). The statute requires that EPA “shall approve” any state process that “will result in plans for all navigable waters within such State, which include” various enumerated elements—including TMDLs—and “adequate implementation” for water quality standards. *See id.* § 1313(e)(1), (3). EPA may not substitute its own plan for a state’s. Thus, EPA has no authority to establish its own plan for implementation of TMDLs or water quality standards. In fact, courts have held that TMDL implementation plans are not part of the TMDL itself and are not themselves subject to EPA review and approval. *See Sierra Club v. Meiburg*, 296 F.3d 1021, 1030 n.10 (11th Cir. 2002) (finding that 33 U.S.C. § 1313(d) and 40 C.F.R. § 130.7 unambiguously do not “indicate[] or even impl[y] that TMDLs include implementation plans”); *Bravos v. Green*, 306 F. Supp. 2d 48, 57 (D.D.C. 2004) (“[T]here is no statutory language requiring submission to or approval of a State’s implementation plan by the EPA[.]”) (emphasis added). *See*

also JA268 (“EPA is not required to and does not approve TMDL implementation plans.”).

Moreover, nothing in the Act authorizes EPA to establish or modify an implementation plan, even if a state fails to prepare one. Instead, if any such state failure resulted in EPA “disapproval” of its continuous planning process, the CWA prohibits that state from receiving authorization to administer the NPDES permitting program within its borders. 33 U.S.C. § 1313(e)(2).

C. States Have Exclusive Authority To Address Nonpoint Sources

Water quality may be impaired by farming, forestry, construction, other land use activities, and even by natural sources. Most of these sources have traditionally been deemed *nonpoint* sources.¹³ In the CWA, Congress reserved the authority to set control measures for nonpoint sources *exclusively* to the states in sections 208, 303(e), and 319. *See* 33 U.S.C. §§ 1288, 1313(e), and 1329. Sections 208 and 319 encourage state programs to promote “practicable” measures to control nonpoint source pollution, but nothing in the Act requires them to regulate nonpoint sources: states may choose between regulatory and non-regulatory approaches. *See Defenders of Wildlife*, 415 F.3d at 1124. Under no circumstance may EPA assume the authority to set pollutant limits for nonpoint

¹³ Whether construction activities involve point source discharges depends on whether there is a discrete conveyance to a water body that is subject to CWA jurisdiction.

sources. *See* S. Rep. No. 95-370, at 8-9 (1977), *reprinted in* 1977 U.S.C.C.A.N. 4326, 4334-35 (control of nonpoint sources “was specifically reserved to State and local governments”).

CWA Sections 208 and 303 (which includes TMDL authority) were both enacted in 1972, but Section 319 was added to the statute in 1987. Section 319 contains provisions parallel to those in Section 303(d)(1), but focuses specifically on addressing nonpoint source pollution. Under Section 319, states are to identify waters that, “without additional action to control nonpoint sources of pollution,” cannot be expected to meet water quality standards. 33 U.S.C. § 1329(a)(1)(A). States must also identify the nonpoint sources or types of sources responsible, and identify “best management practices and measures to control” pollution from those nonpoint sources “to the maximum extent practicable.” *Id.* §§ 1329(a)(1)(B)-(C). Although EPA may review a state’s nonpoint source management program for purposes of determining eligibility for federal grants, it may not step into a state’s shoes and substitute control measures that it prefers. *See id.* §§ 1329(d), (h).

The limited federal role with regard to nonpoint sources is a key element of the CWA’s system of cooperative federalism. Regulation of nonpoint sources involves control over land use, and “regulation of land use is perhaps the quintessential state activity.” *FERC v. Mississippi*, 456 U.S. 742, 768 n.30 (1982); *see also Congregation Kol Ami v. Abington Twp.*, 309 F.3d 120, 135-36 (3d Cir.

2002) (“[L]and use law is one of the bastions of local control, largely free of federal intervention.”).

Many courts have confirmed the importance of state primacy over local land use, both in the CWA and in other contexts. *Miss. Comm’n on Natural Res. v. Costle*, 625 F.2d 1269, 1272 (5th Cir. 1980) (“Concerned that federal promulgation [of water quality standards] would discourage state plans for water quality and ‘would place in the hands of a single Federal official the power to establish zoning measures over – to control the use of – land within watershed areas’ throughout the nation, Congress gave the states primary authority to set water quality standards.”) Quoting H.R. 215, 89th Cong. (1st Sess. 1965), *reprinted in* U.S.C.C.A.N. 3313, 3320-23; *Hess v. Port Auth. Trans-Hudson Corp.*, 513 U.S. 30, 44 (1994) (“regulation of land use [is] a function traditionally performed by local governments”); *Schad v. Borough of Mount Ephraim*, 452 U.S. 61, 68 (1981) (“The power of local governments to zone and control land use is undoubtedly broad and its proper exercise is an essential aspect of achieving a satisfactory quality of life in both urban and rural communities. . . . [T]he courts generally have emphasized the breadth of municipal power to control land use[.]”).

D. States Share Authority With EPA Over Setting Limits For Point Sources

“*Point* source” is a CWA term of art that generally includes discrete conveyances that directly deposit pollutants into navigable waters. Point sources

include ditches and pipes discharging effluent from municipal wastewater treatment systems, municipal stormwater systems, or industrial facilities. Point sources are regulated through limits in NPDES permits issued under CWA Section 402. *See* 33 U.S.C. § 1342. Under the CWA, states can assume primary control over NPDES permitting programs within their jurisdictions. *Id.* § 1342(b). EPA is required to approve a state's proposed NPDES program if it meets certain enumerated elements. *Id.* To date, 46 of the 50 states (including all of the Bay watershed states) have such approved programs. EPA is the NPDES permitting authority only in the District of Columbia and four states outside the Bay watershed.

NPDES permits, whether issued by a state or EPA, must include certain technology-based limits (based on available wastewater treatment technologies), as well as any limits "necessary" to meet water quality standards. 33 U.S.C. § 1311(b), (e). EPA may veto a state permit, after providing the state with written objections and an opportunity for a public hearing on those objections, only if it finds the permit to be "outside the guidelines and requirements of the [CWA]." *See id.* § 1342(d). Thus, in states with approved NPDES programs (such as all the Bay jurisdictions other than the District of Columbia), the CWA empowers those states to determine in the first instance what permit limits on point source permit holders are "necessary" to achieve water quality standards. Both EPA and the

states have rights in the specific process established for the resolution of any EPA objections to state decisions, and EPA cannot upset state choices if they are within the “guidelines and requirements of [the CWA].” *Id.* This balance of federal and state powers is another important element in the CWA’s cooperative federalism structure.

III. Proceedings And Disposition Below

Plaintiffs American Farm Bureau Federation and Pennsylvania Farm Bureau (together, the “Farm Bureaus”) filed suit against EPA challenging the Bay TMDL on January 11, 2011. *See* JA1627-JA1670.¹⁴ The Complaint alleged that EPA exceeded its statutory authority by, in pertinent part, “establish[ing] pollutant loading allocations for individual sources and categories of sources . . . across the entire watershed,” demanding that there be “reasonable assurance” that the pollutant allocations will be achieved, and by mandating implementation of necessary restrictions and control measures “on a federal timeline.” JA1703-JA1704.

¹⁴ On April 4, 2011, the Farm Bureaus filed an Amended Complaint adding National Corn Growers Association, National Pork Producers Council, The Fertilizer Institute, and U.S. Poultry & Egg Association as plaintiffs. *See* JA1671-JA1708. The Amended Complaint set forth substantially identical claims and requested the same relief as the original Complaint. *See id.* On June 24, 2011, National Association of Home Builders filed a similar complaint against EPA. *See* JA1709-JA1753. The district court consolidated the two cases for all purposes on June 28. *See* JA121.

The district court allowed numerous municipal and environmental groups to intervene on EPA's behalf in an order dated October 13, 2011. *See* JA124. The plaintiffs, EPA, and the municipal groups all filed cross motions for summary judgment on the merits. CBF filed briefs in support of EPA's cross motion. The district court heard oral arguments on the cross motions on October 4, 2012. Following the hearing, the Court accepted supplemental briefing from all parties on the issue of "whether the court should defer to the EPA's interpretation of the Clean Water Act and the applicable TMDL regulations." JA131.

The Court's Decision: The district court denied the plaintiffs' motion for summary judgment and granted all cross motions for summary judgment on September 13, 2013, upholding the Bay TMDL in its entirety. *See* JA5-JA103. The court began by rejecting EPA's argument that the plaintiffs lacked standing to challenge the Bay TMDL, finding that it is "clear that Plaintiffs are the object of the action, and that they will incur economic injury if required to comply with the TMDL." JA39. The court further had "no trouble concluding that the causation and redressability requirements are also satisfied." JA41.

With respect to the CWA claims, the district court began by "agree[ing] that EPA is not authorized to establish or otherwise take over TMDL implementation plans." JA45. The court nevertheless found that EPA did not exceed its CWA authority by establishing facility- and sector-specific pollutant allocations within

the Bay TMDL, imposing “backstop” adjustments to state-submitted allocations, requiring “reasonable assurance” that allocations will be achieved, mandating a timeline for implementation of control measures, and reserving exclusive authority to revise the allocations. *See* JA46.

Allocations: The district court held that EPA did not violate the CWA by establishing nonpoint and point source allocations in the Bay TMDL. *See* JA48-JA64. The court found that nothing in the statute “explicitly *prohibits* defining a TMDL as the sum of [point source allocations] and [nonpoint source allocations]” as does EPA’s regulation. *See* JA50 (emphasis added). Ultimately, the court concluded that it is reasonable for EPA to interpret the Act to authorize it to allocate a total load among the various sources throughout a watershed. The court relied heavily on the “back-and-forth between EPA and the Bay states” and found that the allocations were submitted by the states through a collaborative, not coercive, process. *See* JA56-JA64.

Reasonable Assurance: The district court further held that EPA acted within its CWA authority when it required states to provide “reasonable assurance” that the allocations will be achieved. The court reasoned that the “reasonable assurance” requirement was EPA’s attempt to “clarify the basis upon which the proposed allocations are judged.” JA66. In the court’s view, this requirement is a

“practical measure” that “appears to be consistent with” CWA Section 303(d)(1) and has a basis in CWA Section 117(g). JA67-68.

Deadlines: With respect to EPA’s establishment of deadlines for control measures, the district court found that EPA and the states “reached a consensus” regarding the deadlines and thus, the “timeline was [not] a unilateral federal dictate from EPA.” JA73.¹⁵

STATEMENT OF RELATED CASES

This case has not been before this Court previously. The Bay TMDL was also the subject of a recent challenge in the U.S. District Court for the District of Columbia. *See Food & Water Watch v. U.S. Env’tl. Prot. Agency*, No. 1:12-cv-01639. That case, which raises legal challenges not raised here, was dismissed in its entirety for lack of subject matter jurisdiction and failure to state a claim on December 13, 2013. *See id.* ECF Nos. 46, 47.

STANDARD OF REVIEW

This Court reviews *de novo* a district court’s grant of summary judgment “in a case brought under the Administrative Procedure Act (“APA”), and in turn appl[ies] the applicable standard of review to the underlying agency decision.” *Pa. Dep’t of Public Welfare v. Sebelius*, 674 F.3d 139, 146 (3d Cir. 2012). Courts

¹⁵ In this appeal, we are not seeking reversal of several additional findings by the district court.

must declare unlawful and set aside agency actions that are “in excess of statutory jurisdiction, authority, or limitations, or short of statutory right.” 5 U.S.C.

§ 706(2)(C); *see also Johnson v. Orr*, 776 F.2d 75, 80 (3d Cir. 1985).

Because this case raises issues concerning the scope of EPA’s CWA authority, the Court must first examine the statute’s text using all “traditional tools of statutory construction” to decide whether Congress’s intent is clear as to the scope of EPA’s authority. *Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 843, n.9 (1984). Under this first step of the *Chevron* analysis, the Court must “look to the particular statutory language at issue, as well as the language and design of the statute as a whole.” *K Mart Corp. v. Cartier, Inc.*, 486 U.S. 281, 291 (1988). If Congress’s intent is clear, “that is the end of the matter,” and the Court “must give effect to the unambiguously expressed intent of Congress.” *Chevron*, 467 U.S. at 842-43. Should this Court determine that the statute is not clear, then it must then proceed to step two of the *Chevron* analysis and decide whether EPA’s construction of the statute is permissible. *See Chevron*, 467 U.S. at 843. *Chevron* step two requires the Court to “determine whether the regulation harmonizes with the plain language of the statute, its origin, and purpose.” *Zheng v. Gonzales*, 422 F.3d 98, 119 (3d Cir. 2005).

SUMMARY OF ARGUMENT

The Pollutant Allocations, “Reasonable Assurance” Requirements, And Deadlines In The Bay TMDL Exceed EPA’s Statutory Authority

A federal agency can do only what Congress authorizes. *See La. Pub. Serv. Comm’n v. FCC*, 476 U.S. 355, 374 (1986). In the relevant provisions of 303(d) of the CWA, Congress authorized EPA only to establish (when a state has failed to properly establish) the “total maximum daily load” of pollutants. 33 U.S.C. § 1313(d). EPA (or the state) must establish “[s]uch load . . . at a level necessary to implement the applicable water quality standards” in impaired waters. *Id.*

In the Bay TMDL, EPA exceeded that authority. In addition to establishing a “total [] load,” it also (a) assigned pollutant limits (“allocations”) to point and nonpoint sources, (b) required the states to demonstrate how those limits “will” be met (“reasonable assurance”), and (c) imposed deadlines on the states to put control measures in place. In so doing, EPA has assumed ultimate federal control over land use—authority that Congress reserved to the states. The power to regulate land use in general, and nonpoint sources in particular, was specifically reserved for state and local governments—the levels of government closest to the farmers, foresters, builders, homeowners, and others who bear the burdens of land use restrictions. If farmland must go out of production, if harvesting trees must be restricted, if construction must be limited or banned in certain areas, it is the states—not EPA—that must decide to impose those burdens.

Under *Chevron* step one, the source limits, reasonable assurance requirements, and deadlines in the Bay TMDL must be vacated because CWA Section 303(d) plainly does not authorize them, and the “relevant statutory context” confirms that EPA has overreached. *Entergy Corp. v. Riverkeeper, Inc.*, 556 U.S. 208, 223 (2009) (traditional tools of statutory construction require review of statutory provisions in context). In the CWA, Congress expressly incorporated its policy to preserve and protect the *primary* rights of states to control pollution and to plan the development and use of land and water resources. 33 U.S.C. § 1251(b). Congress also directed that “[e]xcept as expressly provided in this [Act], nothing in this [Act] shall . . . be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to [their] waters” *Id.* § 1370.

Congress implemented these policies in part by: (i) denying EPA any jurisdiction over nonpoint sources and related land uses, *see id.* §§ 1329, 1288; and (ii) denying EPA any power to prescribe state plans for implementing water quality standards and TMDLs, *id.* § 1313(e). To interpret Section 303(d)’s authorization to establish a “total [] load” at a specified “level” as silently authorizing federal nonpoint source pollutant limits, “reasonable assurance” requirements, and implementation deadlines would be like (to paraphrase the Supreme Court)

assuming that Congress tried to hide an elephant in a mouse hole. *See Whitman v. Am. Trucking Ass'ns, Inc.*, 531 U.S. 457, 468 (2001).

Under *Chevron* step two, even if Congress's grant of authority were ambiguous (which it is not), an interpretation that Section 303(d) authorizes EPA to establish source limits, require reasonable assurance, and set deadlines is not based on a permissible construction of the Act. Such a construction is not permissible because it would give EPA authority over nonpoint sources and implementation planning that Congress deliberately withheld, upending the careful balance of federal and state power that Congress purposefully built into the Act. Reliance on EPA's regulatory TMDL definition to reach a different result would be misplaced, because an agency rule cannot expand the agency's statutory authority. Moreover, EPA's regulation defines a TMDL as a "sum" (*i.e.*, a "total" load), and therefore on its face does not authorize EPA to impose a particular array of source allocations when it establishes a TMDL. The regulation makes no mention at all of "reasonable assurance" or deadlines.

It is immaterial whether the states "collaborated" with EPA or even consented to the Bay TMDL requirements. State acquiescence cannot confer powers that are absent from the statute. Moreover, Section 303(d) requires no "collaboration" in EPA's establishment of a TMDL. Therefore, under EPA's interpretation that a TMDL properly includes source pollutant limits, "reasonable

assurance” requirements, and deadlines for control measures, EPA need not bother with state collaboration on such matters in its future TMDLs.

Accordingly, this Court should set aside the “allocations,” “reasonable assurance” requirements, and deadlines in the Bay TMDL as unlawfully exceeding EPA’s statutory authority.

Alternatively, EPA Lacks Authority To Mandate Implementation In Any Particular Manner Or Timeframe

Even if EPA had authority (which it does not) to establish a TMDL that includes source limits in addition to establishing a total load, it does not follow that EPA can prescribe state implementation decisions through “reasonable assurance” requirements and deadlines. The CWA confers no authority on EPA to mandate how, whether, or when allocations are achieved, as the courts have recognized. *See Pronsolino v. Marcus*, 91 F. Supp. 2d 1337, 1355 (N.D. Cal. 2000) (states may “refuse to implement them”). EPA’s counsel also acknowledged this point in oral argument to the lower court. *See* JA1758 (“states are free to ignore TMDLs”).

These implementation requirements are absent not only from the statute, but also from EPA’s TMDL regulations, which include no mention of “reasonable assurance” or deadlines. In fact, a prior effort by EPA to add reasonable assurance requirements to its TMDL regulations was blocked by Congress. Thus, even if EPA’s regulatory TMDL definition somehow were construed to authorize the Bay

TMDL's source allocations, it still would not authorize reasonable assurance requirements or deadlines.

EPA's "reasonable assurance" requirements and deadlines are outside the scope of its CWA authority, and this Court should set them aside.

ARGUMENT

I. The Pollutant Allocations, "Reasonable Assurance" Requirements, And Deadlines In The Bay TMDL Exceed EPA's Statutory Authority

This case turns on whether EPA exceeded its authority under CWA Section 303 by establishing more than just a total load (or 276 total loads for nitrogen, phosphorus, and sediment respectively, for the 92 tidal segments of the Chesapeake Bay) in the Bay TMDL. Because Congress's intent is clear (part A below), "that is the end of the matter," and the Court "must give effect to the unambiguously expressed intent of Congress" and reverse the decision below. *Chevron*, 467 U.S. at 842-43. Section 303 plainly authorizes EPA to establish only a "total" "load" at a specific "level," *i.e.*, one that is "necessary to implement the applicable water quality standards." 33 U.S.C. § 1313(d)(1)(C). It does not authorize EPA to allocate that load among individual sources and source sectors. Furthermore, Section 303 does not authorize EPA to require states to provide "reasonable assurance" that those limits will be achieved or to set deadlines for putting measures in place that are designed to achieve the allocations. Read as a

whole, the statute leaves no doubt that Congress intended for such decision-making to remain with the states. *See* 33 U.S.C. §§ 1251(b), 1370, 1329, 1288(f), 1313(e).

Alternatively, if this Court finds that the statute is ambiguous, it should nevertheless reverse the decision below because EPA’s assertion of authority is not in “harmon[y] with the plain language of the statute, its origin, and purpose,” and therefore is not a permissible construction of the statute (part B below). *Zheng*, 422 F.3d at 119.

A. Congress Plainly Authorized EPA To Establish Only A Total Load—Not Allocations, “Reasonable Assurance” Requirements, Or Deadlines—As Part Of A TMDL

It is axiomatic that “an agency literally has no power to act . . . unless and until Congress confers power upon it.” *La. Pub. Serv. Comm’n*, 476 U.S. at 374. Because EPA “is a creature of statute, [it] has only those authorities conferred upon it by Congress; if there is no statute conferring authority, a federal agency has none.” *North Carolina v. EPA*, 531 F.3d 896, 922 (D.C. Cir. 2008). Apart from this inherent limitation on EPA’s authority, the CWA itself expressly recognizes, preserves, and protects “the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution,” and “to plan the development and use . . . of land and water resources[.]” 33 U.S.C. § 1251(b). Congress clearly admonished that, “[e]xcept as *expressly provided* in this [Act], nothing in this [Act] shall . . . be construed as impairing or in any manner affecting any right or jurisdiction of the

States with respect to the waters (including boundary waters) of such States.” *Id.* § 1370 (emphasis added). The CWA must be interpreted in accordance with Congress’s careful scheme of cooperative federalism, under which any authority that Congress did not expressly provide to EPA remains with the states. It cannot be broadly interpreted to strip state and local governments of core powers over the character of their communities. *See United States v. Bass*, 404 U.S. 336, 349 (1971) (absent a clear statement, Congress “will not be deemed to have significantly changed the federal-state balance”).

1. Section 303 Clearly Does Not Authorize Source Limits, Reasonable Assurance Requirements, Or Implementation Deadlines

Section 303(d) requires each state to “identify those waters within its boundaries for which the [technology-based] effluent limitations required [under certain provisions of the Act] are not stringent enough to implement any water quality standard applicable to such waters.” 33 U.S.C. § 1313(d)(1)(A). Each state must then establish a “**total** maximum daily **load**” for those waters. *Id.* § 1313(d)(1)(C) (emphasis added). Congress commanded that “[s]**uch load** shall be established at **a level** necessary to implement the applicable water quality standards[.]” *Id.* § 1313(d)(1)(C) (emphasis added). If EPA “disapproves such identification and load,” it shall, within thirty days, “identify such waters in such

State and establish such loads for such waters as [it] determines necessary[.]” *Id.* § 1313(d)(2).

There is nothing ambiguous about the terms “total,” “load,” and “level” in Section 303(d), which reflect that a TMDL is a single number. *See Friends of the Earth, Inc. v. EPA*, 446 F.3d 140, 141, 144 (D.C. Cir. 2006) (emphasizing that “[d]aily means daily, nothing else” and that there is “nothing ambiguous about this command”). For example, if a law required a manufacturer to set a “total” “load” capacity for an elevator at a “level” necessary to ensure safety and proper functioning, one would expect a single number, *e.g.*, 1,000 pounds. One would not expect to also see allocations of that number among people or objects. None of these terms even hints at the possibility that EPA can, in addition to establishing a total load, approve or establish thousands of source limits (or even one) throughout a watershed as it did in the Bay TMDL.¹⁶ Rather, the statutory command is simple: EPA must specify the total amount of a particular pollutant that a water body could receive and meet water quality standards.

EPA exceeded its authority not only by establishing source limits, but also by mandating that states provide “reasonable assurance” to EPA that those limits

¹⁶ Had Congress intended for EPA to establish a total load *and also* approve or establish allocations of the total load among point and nonpoint sources, surely it would have allowed more than 30 days for EPA to do so. *See* 33 U.S.C. § 1313(d)(2).

“will be achieved,” JA1355, and by requiring states to put control measures and practices in place by certain deadlines. *See* JA1360-66. Section 303(d) says nothing about demonstrating that TMDLs (let alone allocations) will be achieved, or that they will be achieved on a particular timeline. Rather, the CWA requires that states incorporate TMDLs into *their* continuing planning processes. *See* 33 U.S.C. §§ 1313(d)(2), 1313(e). EPA has the authority under Section 303(d) to ensure that a TMDL is set at the correct “level,” *i.e.*, one that is necessary to meet water quality standards. However, nothing in Section 303(d) authorizes EPA to approve, disapprove, or prescribe a state’s plans for achieving water quality standards or judge their likelihood of success. In fact, Congress previously blocked EPA’s attempt to interpret Section 303 as requiring, during TMDL establishment, a showing of “reasonable assurance” that source limits will be achieved. *See* 68 Fed. Reg. 13,608, 13,609 (Mar. 19, 2003) (explaining that Congress “prohibited EPA from implementing [a] final rule” that codified, among other things, a “reasonable assurance” requirement in EPA’s TMDL regulations).

According to the balance of federal versus state power struck by Congress, upon establishment of a total load (whether by a state or EPA), the state is responsible for “incorporat[ing] [the load] into its current plan under [Section 303(e)].” 33 U.S.C. § 1313(d)(2). Section 303(e), in turn, reiterates that states are to incorporate TMDLs into their continuing planning processes and also requires

that those processes “will result in plans” including plans for “adequate implementation . . . of water quality standards.” *Id.* § 1313(e)(3). But Congress withheld the power for EPA to approve, disapprove, or dictate the content of those state plans. *See id.* In the Bay TMDL, EPA has unlawfully converted a TMDL into a mechanism for doing precisely that, running roughshod over the federal/state balance of power in the process.

The lack of statutory authority to establish allocations, reasonable assurance requirements, and deadlines in TMDLs is confirmed by consideration of the language in Section 303 governing the establishment of TMDLs “[f]or the specific purpose of developing information” for waters that *are* meeting water quality standards. *See id.* § 1313(d)(3). That subsection uses operative language that is *virtually identical* to that in subsection 303(d)(1)(C) (on which EPA is relying here). *Compare id. with* 33 U.S.C. § 1313(d)(1)(C). There is no apparent reason for Congress to require allocations, reasonable assurance, and deadlines for waters that are already attaining water quality standards. Accordingly, it seems very unlikely that Congress expected the *same language* to authorize these additional elements when it mandated TMDLs for impaired waters.

2. The Relevant Statutory Context Confirms The Limited Scope Of EPA’s Section 303(d) Authority

The absence of any textual authority in Section 303(d) for EPA to establish or approve allocations of a total load, require “reasonable assurance” that allocated

source limits will be achieved, or set deadlines for putting in place control measures to achieve them, when viewed in the “relevant statutory context” of the CWA, “is best interpreted as limiting [EPA’s] discretion.” *Entergy Corp.*, 556 U.S. at 223. The district court erred in relying on the ***absence*** of a specific ***prohibition*** on EPA’s actions as a basis for upholding those actions. *See* JA50-51; *see also Ethyl Corp. v. EPA*, 51 F.3d 1053, 1060 (D.C. Cir. 1995) (“To suggest . . . that *Chevron* step two is implicated any time a statute does not expressly *negate* the existence of a claimed administrative power . . . , is both flatly unfaithful to the principles of administrative law . . . and refuted by precedent.”).

Section 303(d) “cannot be construed in a vacuum” but rather, “must be read in [its] context and with a view to [its] place in the overall statutory scheme.” *Roberts v. Sea-Land Servs., Inc.*, 132 S. Ct. 1350, 1357 (2012). The Supreme Court has recognized that “[a] provision that may seem ambiguous in isolation is often clarified by the remainder of the statutory scheme — because . . . only one of the permissible meanings produces a substantive effect that is compatible with the rest of the law.” *United Savs. Ass’n of Tex. v. Timbers of Inwood Forest Assocs.*, 484 U.S. 365, 371 (1988). Here, any conceivable ambiguity over whether Section 303(d) authorizes EPA to establish source limits, require “reasonable assurance,” or set deadlines for control measures, is eliminated by the statutory context. Not only does the CWA emphasize state primacy (*see* 33 U.S.C. § 1251(b)) and

retention of state authority over their waters absent express contrary language (*see* 33 U.S.C. § 1370), but it carefully divided power over point sources between EPA and the states, and carefully restricted EPA’s power over nonpoint sources and implementation planning. *See id.* §§ 1370, 1329, 1288, 1313(e).

While Section 303(d) says nothing about source limits or “allocations,” the CWA provisions that *do* address source limits cannot be reconciled with EPA’s assertion of power to prescribe such limits in a federal TMDL. For *point* sources, Congress provided that states can assume the primary authority to set source-specific limits through NPDES permits. *See* 33 U.S.C. § 1342. Forty-six of fifty states have the primary responsibility to set such limits for point sources in Section 402 permits, subject to a specific process for EPA oversight and objection.¹⁷ *See supra* at 22-24. In the remaining four states and the District of Columbia, EPA sets point source limits in Section 402 permits.

For *nonpoint* sources, Congress reserved exclusive authority for states to set limits or require control measures for such sources under Section 208 and Section 319 management programs. *See id.* §§ 1288(b)(2)(F) (state plans to identify and control nonpoint sources to the extent feasible), 1329 (nonpoint source

¹⁷ Information on the status of state programs under CWA Section 402 is available on EPA’s website. *See* U.S. EPA, *National Pollutant Discharge Elimination System (NPDES), State Program Status*, available at <http://cfpub.epa.gov/npdes/statestats.cfm>.

management). These provisions require state plans that include programs for the control of nonpoint sources, and they provide incentives to states to carry out those plans. Section 319, which Congress added in 1987, requires states to submit reports to EPA that: (i) ***identify waters*** that “without additional action to control nonpoint sources of pollution, cannot reasonably be expected to attain or maintain applicable water quality standards;” (ii) ***identify nonpoint sources*** that add significant pollution to the identified waters; and (iii) describe the process for identifying ***best management practices and measures*** to control and reduce nonpoint source pollution to the “maximum extent practicable.” 33 U.S.C. § 1329(a)(1) (emphasis added). States are also required to prepare and submit to EPA “management programs” for the control of nonpoint source pollution, which must identify best management practices and measures that will be undertaken, identify programs to achieve implementation of those practices, and set a schedule containing milestones providing for utilization of the best management practices “at the earliest practicable date.” *Id.* § 1329(b)(2).

These CWA provisions essentially provide a nonpoint source-specific framework for addressing water quality impairment. Unlike Section 303(d), however, Section 319 ***does*** speak to the authority to set limits and control measures for nonpoint sources and exclusively reserves any such authority for the states. Importantly, Congress withheld from EPA any backup authority to set nonpoint

source control measures or schedules, even if states fail to act.¹⁸ If Section 303(d) provides the authority to set nonpoint source limits, reasonable assurance requirements, and deadlines in a TMDL, as EPA contends, the parallel provisions in Section 319 would improperly be rendered “mere surplusage.” *Dunn v. Commodity Futures Trading Comm’n*, 519 U.S. 465, 472 (1997).

Equally important, Section 319 requires only that nonpoint source pollution be reduced “to the maximum extent practicable.” 33 U.S.C. § 1329(a)(1)(C). If Section 303 were construed to authorize EPA to establish source limits and implementation deadlines for nonpoint sources without regard to cost or practicability, it would nullify the “practicable” standard established in Section 319. *See Dunn*, 519 U.S. at 472 (“[L]egislative enactments should not be construed to render their provisions mere surplusage.”).

States are free to choose between regulatory and non-regulatory approaches to nonpoint source control. Under no circumstance can EPA assume the authority to set limits for nonpoint sources. *See S. Rep. No. 95-370*, at 8-9 (1977), *reprinted in* 1977 U.S.C.C.A.N. 4326, 4334-35 (control of nonpoint sources “was specifically reserved to State and local governments”).

¹⁸ If a state fails to have an approved nonpoint source management program, a “local public agency or organization” may establish such programs. *See* 33 U.S.C. § 1329(e).

Interpreting Section 303 in a manner consistent with this division of authority, it is obvious that Congress did not intend to authorize EPA to establish both a total load *and* source limits (let alone reasonable assurance requirements and deadlines). Allowing EPA to do so would undo Congress's decision to reserve exclusive authority to the states to set nonpoint source limits or mandate nonpoint source controls.

3. The Bay TMDL Violates CWA Requirements For Cooperative Federalism

EPA's Bay TMDL impermissibly alters the careful balance of power that Congress struck in the CWA between the federal government and the states. It is indisputable that land use regulation is a state and local function. *See, e.g., FERC v. Mississippi*, 456 U.S. at 768, n.30 (“[R]egulation of land use is perhaps the quintessential state activity.”); *Congregation Kol Ami*, 309 F.3d at 135-36 (“[L]and use law is one of the bastions of local control, largely free of federal intervention.”).¹⁹ This basic federalism principle is made especially plain in the CWA, and it must guide the Court's interpretation of Section 303. *See Solid Waste Agency N. Cook Cnty. v. U.S. Army Corps of Eng'rs* (“SWANCC”), 531 U.S. 159,

¹⁹ The district court recognized that it is “logical for states to retain control over . . . non-point pollution regulation because non-point pollution control measures often involve local land use and zoning decisions, activities which are generally within the well-protected province of state and local government.” JA46. It nevertheless erred by failing to give effect to that state primacy.

173 (2001) (rejecting EPA “interpretation [of the CWA that] alters the federal-state framework by permitting federal encroachment upon a traditional state power”). Construing the CWA as a whole, Section 303(d)’s grant of authority to EPA to establish a “total maximum daily load” is hardly the sort of clear statement necessary for a court to deem that Congress has “significantly changed the federal-state balance.” *See Bass*, 404 U.S. at 349.

“[I]t [is] implausible that Congress would give to the EPA through the[] modest words [in Section 303] the power” to control land use through a TMDL. *Whitman v. Am. Trucking Ass’n, Inc.*, 531 U.S. 457, 468 (2001). Congress “does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not, one might say, hide elephants in mouseholes.” *Id.* Had Congress actually intended to give EPA such sweeping authority over land use and planning as the Agency asserts in the Bay TMDL, it surely would have done so explicitly. It would not have obliquely trampled over traditional state authority by merely directing EPA to establish a “total maximum daily load . . . at a level necessary to implement the applicable water quality standards.” 33 U.S.C. § 1313(d)(1)(C).

The district court fundamentally erred by upholding an interpretation of CWA Section 303 that disregards Congress’s reservation of primary state responsibility over water quality and land use policy, *see* 33 U.S.C. §§ 1251(b),

1370, 1313(e), and renders meaningless the CWA's carefully circumscribed federal role in regard to nonpoint sources, *see id.* §§ 1329, 1288. The lower court's interpretation of Section 303(d) cannot be reconciled with the "provisions of the whole [CWA]" or with its "object and policy." *Prestol v. Atty. Gen. of the United States*, 653 F.3d 213, 217 (3d Cir. 2011). On the contrary, only one permissible interpretation "produces a substantive effect that is compatible with the rest of the law." *United Savs. Ass'n of Tex.*, 484 U.S. at 371. Under that interpretation, EPA has authority to establish only a total load. States are responsible for determining whether, how, and when to achieve that load through their own planning processes, nonpoint source management programs, and (if applicable) NPDES permitting programs. *See Pronsolino*, 291 F.3d at 1140. EPA may exercise its various oversight powers under these other CWA programs and provisions, but it may not use a TMDL to seize authorities that Congress withheld.

4. CWA Section 117 Does Not Authorize Federal Allocations, Reasonable Assurance Requirements, Or Deadlines

The district court compounded its error by relying, in part, on CWA Section 117(g), 33 U.S.C. § 1267(g), to justify EPA's unlawful expansion of Section 303. *See, e.g.*, JA64-65 (concluding that Section 117(g) supports EPA's authority to substitute its own allocations and implementation decisions for the states through "backstop measures"); JA68 (concluding that Section 117(g) supports EPA's "reasonable assurance" requirement); JA70 (concluding that Section 117(g)

supports EPA's authority to impose allocations and require EPA approval to change those allocations). The district court's holding in this respect is in error.

Section 117(g), which predated the Bay TMDL by approximately a decade, provides that EPA "shall ensure that *management plans are developed and implementation is begun* by signatories to the Chesapeake Bay Agreement to achieve and maintain [] the nutrient goals of the Chesapeake Bay Agreement[.]" 33 U.S.C. § 1267(g) (emphasis added). That provision, which must also be interpreted in light of the CWA's emphasis on state primacy, does not even mention "total maximum daily load" or Section 303. On its face, Section 117(g) does not give EPA authority to approve or establish limits for individual sources and source sectors when it establishes a total load, nor does it authorize EPA to require "reasonable assurance" that such limits "will" be achieved. The lack of an express authorization in Section 117(g) for EPA to impose TMDL-based source limits or require "reasonable assurance," when viewed in the "relevant statutory context" of the CWA, "is best interpreted as limiting [EPA's] discretion." *Entergy Corp.*, 556 U.S. at 223.

Section 117(g)'s legislative history confirms what the statutory text demonstrates: that Congress did not provide EPA with any authority to establish source limits when establishing a total load under Section 303, much less to require the achievement of certain pollutant reductions or impose deadlines for putting

control measures in place. Quite the contrary, Congress expected that EPA would meet the goals of Section 117(g) through the “award of implementation grants.” H.R. Rep. No. 106-550, at 3 (2000). It clarified that nothing in Section 117(g) “provides EPA with any additional regulatory authorities.” *Id.* Given Congress’s clarification, it is evident that Section 117(g) cannot expand Section 303 to authorize EPA’s establishment of source limits, “reasonable assurance” requirements, or implementation deadlines.

* * *

Reading Section 303 against the backdrop of Congress’s emphasis on state primacy over land use policy and nonpoint source control, it is clear that the CWA does not confer authority to establish source limits in addition to a total load, require “reasonable assurance” that such limits will be achieved, or impose deadlines for putting in place control measures to achieve those limits.

B. Even If The CWA Were Ambiguous, EPA’s Assertion Of The Power To Establish Source Limits, Require “Reasonable Assurance,” Or Impose Deadlines Is Not Based On A Permissible Construction Of The CWA

Because the Bay TMDL is contrary to the plain text of the CWA, this case should be resolved by step one of the *Chevron* inquiry. *See* 467 U.S. at 842-43. But even if the Court determines the statute is ambiguous, it should nevertheless find that EPA’s assertion of authority to establish source limits and other

requirements under Section 303(d) is not based on a permissible construction of the Act.

1. EPA's Interpretation Would Override The CWA's Structure of Cooperative Federalism

EPA's interpretation of its TMDL authority is contrary to the CWA's cooperative federalism scheme and Congress's express recognition and preservation of the states' primary authority over water pollution control and land and water use. *See, e.g.*, 33 U.S.C. §§ 1251(b), 1370. Because EPA's statutory interpretation is "not reasonable in light of the legislature's revealed design," it fails the second prong of the *Chevron* analysis. *Woodall v. Fed. Bureau of Prisons*, 432 F.3d 235, 249 (3d Cir. 2005); *see also Am. Bar Ass'n v. FTC*, 430 F.3d 457, 469 (D.C. Cir. 2005) (agency interpretation that transforms the statutory scheme envisioned by Congress is not "reasonable" and is unworthy of *Chevron* deference); *Zheng*, 422 F.3d at 119-20 (agency regulation "not based on a permissible reading" of the governing statute because it did not "harmonize with the plain language of the statute, its origin, and purpose").

Congress emphasized in the CWA that states have the primary authority to address water pollution and plan for the development and use of land and water resources. *See SWANCC*, 531 U.S. at 166-67. It left no doubt that the Act must be interpreted to preserve state authority absent an express provision to the contrary.

See 33 U.S.C. § 1370. The Act’s clear purpose to preserve state authority cannot be harmonized with EPA’s interpretation of Section 303.

Section 303 requires that a TMDL be set at a “*level* necessary to implement the applicable water quality standards.” 33 U.S.C. § 1313(d)(1)(C) (emphasis added). Nothing in that section even suggests that a “level” means specific source limits, or that states must provide EPA assurances of achievement, or that they must meet EPA-imposed deadlines. Here, “level” has one straightforward meaning that gives effect to Congress’s express intent to preserve state and local governments’ powers to regulate land use and water use—one that achieves the goals of the CWA and the TMDL program while preserving local authority. Interpreting Section 303 to include source limits, reasonable assurance requirements, and deadlines undercuts the foundational federalism principles of the CWA.

Determining how to divide a total nitrogen, phosphorus, or sediment load among sources and source sectors necessarily dictates intensely local land use decisions, including, for example: whether greater reductions should be demanded of farmlands or forest lands; where residential and commercial development should occur; or how much nitrogen, phosphorus, and sediment can be carried from croplands, which in turn dictates how much fertilizer can be applied and in what manner. Strict source limits on nitrogen, phosphorus, or sediment from farm

lands may make farming unworkable, and force land to be taken out of productive use. It should come as no surprise that Congress intended for states—not EPA—to make such decisions. *See, e.g.*, 33 U.S.C. §§ 1251(b), 1370; *see also Hess*, 513 U.S. at 44; *FERC v. Mississippi*, 456 U.S. at 768, n.30.

EPA’s interpretation of Section 303 unlawfully gives the federal government control over these types of local decisions. When EPA established the Bay TMDL, it demanded that the states submit implementation plans that included source limits, along with “reasonable assurances” that the source limits will be achieved. *See supra* at 9-10. EPA established the source limits from the state plans as part of the Bay TMDL, declaring that any changes require EPA approval. *See id.*

EPA also set deadlines for implementing actions and control measures designed to achieve its source limits, *see* JA1361, even though nothing in the CWA authorizes EPA to mandate TMDL achievement, whether on a specific timeline or not. *See, e.g., Pronsolino*, 291 F.3d at 1140 (concluding that a TMDL for nonpoint source pollutants posed no federalism concerns because the state remained free to choose “both if and how” to implement it); *Bravos v. Green*, 306 F. Supp. 2d 48, 52 (D.D.C. 2004) (“Unlike [Section 402] permits, TMDLs are not federally enforceable.”). EPA did all of this even though it has long held the view that it does not (and cannot) approve state TMDL implementation plans. *See* JA268.

EPA's assertions of expanded authority concerning nonpoint sources are especially untenable. It is well settled that Congress deliberately withheld authority from EPA to directly control (or even to mandate that states control) nonpoint source pollution: it limited EPA's influence over nonpoint sources to providing or withholding grant money. *See Pronsolino*, 291 F.3d at 1127-28; *see also* S. Rep. No. 95-370, at 8-9 (1977), *reprinted in* 1977 U.S.C.C.A.N. 4326, 4334-35 ("In 1972, Congress made a clear and precise distinction between point sources, which would be subject to direct Federal regulation, and nonpoint sources, control of which was specifically reserved to State and local governments . . . judging that these matters were appropriately left to the level of government closest to the sources of the problem."). Moreover, in Sections 208 and 319, Congress made clear that it did not intend to require states to do any more than what is "practicable" and "feasible" to reduce levels of pollution that result from certain categories and subcategories of nonpoint sources. *See, e.g.*, 33 U.S.C. §§ 1288(b)(2)(F), 1329(a)(1)(C).

If the statutory language could be stretched so far as EPA has taken it, EPA could effectively impose farm-by-farm or even acre-by-acre pollutant limits across the countryside, mandating achievement of those limits on a federal timeline. This authority would completely override the narrow federal role that Congress established for the agency in Sections 208 and 319 of the Act. The statutory text

and purpose do not countenance such a result. Like the regulation this Court invalidated in *Woodall*, EPA's interpretation here is not based on a permissible construction of the statute. *See Woodall*, 432 F.3d at 249 (“We do not believe that the regulations are a permissible construction because they fail to take into account Congress's indications that certain individualized factors—including a sentencing court's recommendations—should be considered in the [Bureau of Prisons'] placement and transfer scheme.”).

In sum, the CWA's emphasis on state authority, particularly its detailed framework for point and nonpoint source pollution control, demonstrate that Congress did not authorize EPA to establish source limits, “reasonable assurance” requirements, or deadlines when setting a “total maximum daily load” under Section 303. Interpreting Section 303 more expansively would run afoul of Congress's intent that states retain primary authority “to plan the development and use . . . of [their] land and water resources,” 33 U.S.C. § 1251(b), and that they retain exclusive authority to set nonpoint source limits, weighing such matters as practicability and feasibility. EPA's contrary view is not based on a permissible construction of the CWA.

2. “Collaboration” By The Bay States Is Legally Irrelevant To The Question Of EPA's Statutory Authority

EPA has posited (and the district court agreed) that EPA's extensive intrusion into traditional state authority was acceptable because the Bay TMDL

was a “collaborative” effort and because the states themselves provided the allocations. *See* JA59-JA64. This rationale fails for several reasons.

First, no amount of state collaboration can rewrite the statute. EPA has only those powers that Congress gives it by statute, and states cannot give EPA authority (*e.g.*, the power to set source limits in a TMDL) that Congress did not confer. *See, e.g., La. Pub. Serv. Comm’n*, 476 U.S. at 374; *North Carolina*, 531 F.3d at 922. Even if each affected state gladly acquiesced to the Bay TMDL, the TMDL is an **EPA** action that is lawful *only* if authorized in the CWA.

Second, even if “collaboration” could ever expand statutory power (which it cannot), when two parties have unequal power, “collaboration” by the less powerful party cannot logically support an inference of voluntary consent. It is thus hardly surprising that numerous state comment letters reveal the reluctance underlying the states’ “collaboration.” *See supra* at 13-14. The district court selectively addressed Plaintiffs’ record citations relating to EPA’s arm-twisting by focusing only on a subset of the citations that Plaintiffs provided. *See* JA60-JA61. The court did not even acknowledge the strong objections to the Bay TMDL raised by New York, Pennsylvania, Virginia, and West Virginia. *See supra* at 13-14.

Finally, nothing in Section 303(d) requires EPA “collaboration” or “cooperation” with states in setting TMDLs. For this reason, if EPA’s interpretation is permitted to stand, in the *next* TMDL, and every one thereafter,

EPA could unilaterally prescribe the entire TMDL—source limits, deadlines, and all—without any state input. Thus, even if the Court assumes that the states collaborated in EPA’s action, their collaboration cannot authorize EPA’s unlawful power grab.

3. The Language Of EPA’s Regulatory TMDL Definition Does Not Support Expanding EPA’s TMDL Authority

EPA defends its assertion of the authority to establish allocations by referencing its regulation at 40 C.F.R. § 130.2, which defines a TMDL as the “sum” of individual pollutant load allocations to point and nonpoint sources. On its face, the text of the regulation appears to confirm what the statute says, which is that EPA has authority to establish only the total or “sum.” Moreover, the fact that pollutant allocations may shed light on how and when water quality goals will be achieved cannot justify incorporating those properly *state* decisions into a *federal* TMDL.

EPA claimed, in its response to public comments on the draft Bay TMDL, that it has an “obligation to ensure that the sum of the [individual allocations] adds up to a ‘total’ number that will implement the applicable water quality standards.” JA1605. But as a technical matter, this makes no sense, and it misleadingly suggests that a TMDL derives from individual allocations. The statute commands that a TMDL be set at a “level” that represents the total amount of a pollutant that can be loaded into a water body and still meet water quality standards. That

“level” is derived (and was derived for the Bay TMDL) through technical modeling, not by calculating individual allocations and then adding them together.

The district court erroneously relied on *Anacostia Riverkeeper* for the proposition that it makes sense for a TMDL writer (even if it is EPA) to develop allocations at the same time it establishes a TMDL. JA58-JA59. “[D]iv[ing] up acceptable pollution levels,” as that court put it, 798 F. Supp. 2d at 249-50, has nothing to do with TMDL establishment, which involves determining whether the “total” is set at a “level necessary to implement the applicable water quality standards.” 33 U.S.C. § 1313(d)(1)(C). Rather, it deals with the likelihood that a TMDL will be *achieved* through particular source limits.²⁰ As explained above (at 37-38, 40-43), how and when to achieve water quality goals—through allocations, Section 319 plans, or otherwise—is for the states to decide, with far more modest EPA oversight (*see* CWA Section 319) than EPA has exercised in the Bay TMDL.

4. No Regulation Can Grant Authority That Congress Did Not Confer

The legal analysis does not change because EPA has a regulation that refers to a TMDL as being the “sum” of individual “allocations.” If the rule means what

²⁰ The *Anacostia Riverkeeper* court was concerned that point source permit writers might either under-enforce (by setting individual point source limits that, in the aggregate, exceed the total load) or over-enforce a TMDL (by setting unnecessarily harsh individual point source limits). But there are appropriate mechanisms to alleviate that risk, such as objecting to the issuance of point source permits. *See* 33 U.S.C. § 1342(d).

EPA says, *i.e.*, that it authorizes the establishment of allocations, reasonable assurance requirements, and deadlines, then it is unlawful.

The district court placed too much emphasis on how courts have cited EPA's TMDL regulation over the years "without issue." JA52-JA53. "It is a basic tenet that 'regulations, in order to be valid, must be consistent with the statute under which they are promulgated.'" *Decker v. Nw. Env'tl. Def. Ctr.*, 133 S. Ct. 1326, 1334 (2013). That EPA's TMDL regulation has existed over time without challenge is not dispositive. *See, e.g., Brown v. Gardner*, 513 U.S. 115, 122 (1994) (rejecting the Government's argument that a regulatory interpretation "deserves judicial deference due to its undisturbed endurance for 60 years," noting that "[a] regulation's age is no antidote to clear inconsistency with a statute"); *Rapanos v. United States*, 547 U.S. 715, 752 (2006) (unreasonable, yet longstanding, interpretation cannot benefit from "a sort of 30-year adverse possession that insulates disregard of statutory text from judicial review"). As explained above, EPA's interpretation of its Section 303 authority contradicts the statute, and the mere age of EPA's TMDL regulations cannot save it.

* * *

For these reasons, EPA's expansive interpretation of Section 303 is unlawful and must be set aside under the second step of the *Chevron* analysis.

II. Even If EPA Has Authority To Approve Or Establish Allocations, It Nevertheless Lacks Authority To Mandate State Implementation In Any Particular Manner Or Timeframe

A. The “Reasonable Assurance” Requirements And Deadlines Unlawfully Restrict State Discretion

If this Court holds that EPA has authority to establish source limits in addition to establishing a total load under CWA Section 303, it does not follow that EPA has authority to require the states to implement them—thereby giving EPA continuing enforcement authority—as EPA did in the Bay TMDL. *See, e.g.*, JA1437-38 (explaining that states can propose revisions to specific allocations, but EPA must approve such revisions). In particular, by requiring states to provide “reasonable assurance” that EPA’s allocations “will” be achieved, and imposing deadlines for putting in place control measures to achieve the allocations, EPA improperly denied states the freedom to “moderate or to modify the TMDL reductions, or even refuse to implement them, in light of countervailing state interests.” *Pronsolino*, 91 F. Supp. 2d at 1355. The CWA cannot reasonably be interpreted to allow EPA to elevate federal TMDL allocations and deadlines over a state’s own water quality standard implementation policies. *See* 33 U.S.C. §§ 1251(b), 1313(e). Congress withheld from EPA the power to take over or revise state plans for the implementation of TMDLs and water quality standards. *See supra* at 19-20. The Bay TMDL flouts the statutory limits on EPA’s power.

At oral argument below, EPA's counsel claimed that "states are free to ignore TMDLs" and that states can effectively ignore the load allocations "included in the TMDL." *See* JA1758. EPA's litigation stance is puzzling considering the Bay TMDL's clear statement that any changes to the allocations require EPA approval, coupled with its mandatory reasonable assurance requirements and deadlines for putting control measures in place. Collectively, these confirm that the TMDL unlawfully limits the states' discretion to establish and carry out their *own* implementation plans that may or may not conform to the allocation scheme and deadlines set out in the TMDL.²¹ EPA is using those measures to prevent states from ignoring EPA allocations even if states develop alternative implementation plans that will also achieve water quality standards, with either the same or a different set of allocations, on either the same or a different timeline.

²¹ In its reply brief below, EPA specifically rejected the notion that a state could rewrite a load allocation without EPA's approval. *See* M.D. Pa. ECF No. 110, at 13 n.7. EPA has not explained why a state is free to disregard a load allocation altogether, yet would have to obtain EPA approval to adjust a load allocation by even a slight amount. The statement in the Bay TMDL regarding EPA approval belies the suggestion by EPA's counsel that states can ignore the load allocations in the Bay TMDL.

B. EPA's Regulations Do Not Justify EPA's Requirements For "Reasonable Assurance" Or Its Deadlines

Finally, even if EPA had authority to approve or establish source limits in addition to establishing a total load under CWA Section 303, there is no arguable basis in EPA's regulations to justify EPA's imposition of either: (i) the requirement that states provide "reasonable assurance" that source limits will be achieved; or (ii) deadlines for putting control measures in place. EPA's regulations do not mention either of these concepts. In fact, Congress blocked EPA's attempt to add the "reasonable assurance" requirement into its TMDL regulations. *See* 68 Fed. Reg. at 13,609.

CONCLUSION

The judgment of the district court should be reversed. This Court should hold unlawful and vacate from the Bay TMDL the source allocations (*e.g.*, Sections 8, Table 9-4 and Appendices Q and R), "reasonable assurance" requirements (*e.g.*, Sections 7, 8, and 10), compliance deadlines (*e.g.*, Section 7 and 10).

Dated: January 27, 2014

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COMBINED CERTIFICATIONS

I, Richard E. Schwartz, hereby certify:

1. That this brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B) because this brief contains 13,634 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii).

2. That this brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5), and the type style requirements of Fed. R. App. P. 32(a)(6) because this brief has been prepared in a proportionally spaced serif typeface using Microsoft Office Word 2007 in 14-point Times New Roman font.

3. Pursuant to Local Rule 46.1, that Richard E. Schwartz is a member in good standing of the bar for the United States Court of Appeals for the Third Circuit.

4. That text of the electronic brief is identical to the text in the paper copies.

5. That a virus detection program (McAfee VirusScan Enterprise, Version 8.7i) has been run on the electronic file and no virus was detected.

Dated: January 27, 2014

s/ Richard E. Schwartz
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CERTIFICATE OF SERVICE

The undersigned attorney hereby certifies that the BRIEF FOR PLAINTIFFS-APPELLANTS AMERICAN FARM BUREAU FEDERATION, NATIONAL ASSOCIATION OF HOME BUILDERS, NATIONAL CORN GROWERS ASSOCIATION, NATIONAL PORK PRODUCERS COUNCIL, PENNSYLVANIA FARM BUREAU, THE FERTILIZER INSTITUTE, AND U.S. POULTRY & EGG ASSOCIATION was filed electronically with the Clerk of the Court for the United States Court of Appeals for the Third Circuit using the appellate CM/ECF system. Participants in the case who are registered CM/ECF users will be served by the appellate CM/ECF system.

Dated: January 27, 2014

/s/Richard E. Schwartz
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RECORD NO. 13-4079

In The
United States Court of Appeals
For The Third Circuit

**AMERICAN FARM BUREAU FEDERATION; PENNSYLVANIA FARM
BUREAU; THE FERTILIZER INSTITUTE; U.S. POULTRY & EGG
ASSOCIATION; NATIONAL PORK PRODUCERS COUNCIL;
NATIONAL CORN GROWERS ASSOCIATION;
NATIONAL ASSOCIATION OF HOME BUILDERS,**

Plaintiffs – Appellants,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,

Defendants – Appellees.

**CHESAPEAKE BAY FOUNDATION; CITIZENS FOR PENNSYLVANIAS
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,**

Intervenors – Appellees.

**ON APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA**

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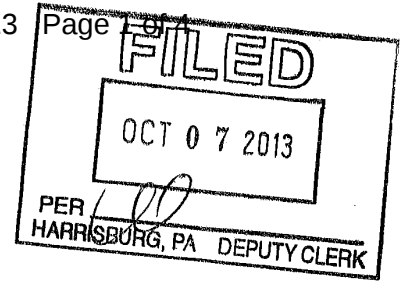
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Case 1:11-cv-00067-SHR Document 153 Filed 10/07/13



**IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA**

**AMERICAN FARM BUREAU
FEDERATION, *et al.*,**

Plaintiffs,

v.

**UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY,**

Defendant.

Case No. 11-cv-00067-SHR

**PLAINTIFFS' NOTICE OF APPEAL TO THE UNITED STATES
COURT OF APPEALS FOR THE THIRD CIRCUIT**

Notice is hereby given that Plaintiffs American Farm Bureau Federation, Pennsylvania Farm Bureau, The Fertilizer Institute, National Pork Producers Council, National Corn Growers Association, U.S. Poultry & Egg Association, and National Association of Home Builders (collectively, "Plaintiffs"), appeal to the United States Court of Appeals for the Third Circuit from the Order entered September 13, 2013 [Doc. 150] and Final Judgment entered on September 17, 2013 [Doc. 151]. Such Order and Final Judgment are appealable pursuant to 28 U.S.C. § 1291.

Dated: October 7, 2013

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Court Name: District Court
Division: 1
Receipt Number: 111014169
Cashier ID: prwme
Transaction Date: 10/04/2013
Payer Name: RHOADES SINON LLP

NOTICE OF APPEAL/DOCKETING FEE
For: RHOADES SINON LLP
Case/Party: D-PAM-1-11-CV-000067-001
Amount: \$455.00

Paper Check Conversion
Check/Money Order Num: 13337
Amt Tendered: \$455.00

Total Due: \$455.00
Total Tendered: \$455.00
Change Amt: \$0.00

Only when bank clears the check or
verifies credit of funds is the fee
or debt officially paid or
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charged for returned checks.

Plaintiffs allege that EPA lacked authority under the Clean Water Act (“CWA”), 33 U.S.C. § 1251, *et seq.*, to issue the TMDL; the TMDL is *ultra vires*; the TMDL is arbitrary and capricious; and EPA failed to provide adequate public notice and comment, in violation of the Administrative Procedures Act (“APA”), 5 U.S.C. § 500, *et seq.* (*See* Doc. 16, Am. Compl.)

Understanding the legal, procedural, historical, and scientific complexities of this case requires a detailed recitation of the extensive relevant background information, including information regarding the parties to this suit, the complex legal framework established under the CWA, the historical efforts to improve water quality in the Chesapeake Bay, and the scientific modeling and calculations utilized by EPA in promulgating the final TMDL. The court will address each topic *ad seriatum* before turning to Plaintiffs’ substantive arguments.

A. The Parties

EPA is the federal agency charged with the administration and enforcement of the CWA, in accordance with the delegations of authority from Congress contained in that statute. (Doc. 16 ¶ 18.) On December 29, 2010, EPA promulgated the Final TMDL for the Chesapeake Bay, which is the subject of this suit. (*Id.* ¶ 70.)

The original complaint (Doc. 1) was filed by Plaintiffs American Farm Bureau Federation and the Pennsylvania Farm Bureau. The American Farm Bureau Federation is a voluntary general farm organization formed in 1919 to protect, promote, and represent the business, economic, social, and educational interests of American farms. (Doc. 16 ¶ 7.) The American Farm Bureau Federation represents more than 6.2 million member families through member organizations, some of

which are located in the 64,000-square mile Chesapeake Bay watershed. (*Id.* ¶¶ 7, 8.) The Pennsylvania Farm Bureau is a general farm organization that has provided legislative support, information, and services to Pennsylvania’s farmers and rural families since 1950. (*Id.* ¶ 11.) Some of the Pennsylvania Farm Bureau members have farms located within the Chesapeake Bay watershed. (*Id.*)

On April 4, 2011, an amended complaint was filed, which also named as Plaintiffs The Fertilizer Institute, a group that represents the nation’s fertilizer industry, as well as several non-profit trade associations, *to wit*: the National Pork Producers Council, the National Corn Growers Association, the National Chicken Council, the U.S. Poultry and Egg Association, and the National Turkey Federation. (*Id.* ¶¶ 12-17.)

On October 13, 2011, the court granted three motions to intervene. (Doc. 87.) In those motions, two different groups of intervenors and a separate municipal association, sought leave to intervene as Defendants in this action. The first group includes various environmental and public interest groups, *to wit*: the Chesapeake Bay Foundation, Inc.; Citizens for Pennsylvania’s Future; Defenders of Wildlife; Jefferson County Public Service District; Midshore Riverkeeper Conservancy; and the National Wildlife Federation (collectively, the “CBF Group”). The second group includes several municipal clean water associations, *to wit*: the National Associations of Clean Water Agencies (“NACWA”); the Maryland Association of Municipal Wastewater Agencies, Inc. (“MAMWA”); and the Virginia Association of Municipal Wastewater Agencies, Inc. (“VAMWA”) (collectively, the “Municipal Associations Group”). The final movant was the Pennsylvania Municipal Authorities Association (“PMAA”). The court granted the

motions, finding that the intervenors have a legally cognizable interest in this litigation that could be adversely affected by the outcome of this litigation. (*Id.*; *Am. Farm Bureau Fed'n v. EPA*, 278 F.R.D. 98 (M.D. Pa. 2011).)

B. Statutory Framework

In addition to the alleged procedural shortcomings of the TMDL under the APA, this dispute, at its core, raises questions regarding the proper division of duties between the states and the federal government under the applicable CWA statutory framework. Thus, to properly understand the parties' respective arguments, it is necessary to provide the framework upon which these claims rest. This framework will provide context for later analysis of the legal issues surrounding the Bay TMDL.

The CWA is a comprehensive water quality statute designed "to restore and maintain the chemical, physical and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a); *PUD No. 1 of Jefferson Cty. v. Wash. Dep't of Ecology*, 511 U.S. 700, 704 (1994). "A core element of the CWA is a two-step approach to improving water quality, which delegates certain responsibilities to EPA and others to the states in furtherance of the Act's stated purpose of promoting cooperation between federal and state governments." *Anacostia Riverkeeper, Inc. v. Jackson*, 798 F. Supp. 2d 210, 214 (D.D.C. 2011) (citing 33 U.S.C. § 1251(b)). Thus, water quality restoration and maintenance efforts, as envisioned by the CWA, demand cooperative federalism and require significant levels of communication and

coordination between EPA and the state environmental agencies in the six states¹ and the District of Columbia (collectively, “Bay Jurisdictions”).²

Generally, efforts to improve water quality first focus on the establishment of technology-based limitations on individual discharges into navigable waters from point sources. 33 U.S.C. § 1311. Point sources are “any discernable, confined and discreet conveyance . . . from which pollutants are or may be discharged,” such as any pipe, ditch, channel, or tunnel. 33 U.S.C. § 1362(14). These sources represent a logical starting point for monitoring and regulating water contamination because they are easily identifiable sources of contamination. *See Anacostia Riverkeeper*, 798 F. Supp. 2d at 214. Pursuant to Section 301 of the CWA, EPA is to develop effluent limitations based upon “the best available technology economically achievable” that cap the maximum allowable discharge at each individual point source. 33 U.S.C. § 1311(b)(1). The primary method used to implement these limitations is the National Pollution Discharge Elimination System (“NPDES”). *Id.* The NPDES is a permit program through which individual entities that discharge point source pollutants receive permits setting the maximum discharge levels of a particular contaminant. *See id.*; *see also Sierra Club v. Meiburg*, 296 F.3d 1021, 1024 (11th Cir. 2002) (“The statute gives EPA the authority to issue permits for point sources, and those permits are to establish technology-based effluent limitations that incorporate increasingly stringent levels

¹ The Bay states include Virginia, Maryland, Delaware, West Virginia, Pennsylvania, and New York.

² For ease and the sake of clarity, “Bay Jurisdictions” and “Bay states” may be used interchangeably by the court, notwithstanding the inclusion of the District of Columbia.

of pollution control technology over time.”); *Anacostia Riverkeeper*, 798 F. Supp. 2d at 214.

In addition to regulating point sources, non-point sources are also regulated under the CWA. The distinction between point and non-point sources of pollution is critical to understanding the primary issue in this case, as is evident from the analysis below. As stated, point sources of pollution emanate from a discrete conveyance. Non-point sources, meanwhile, are non-discrete sources such as sediment run-off from agriculture fields or from timber harvesting. *See Pronsolino v. Nastri*, 281 F.3d 1123, 1129 (9th Cir. 2002). Unlike point source pollution, EPA lacks the authority to control non-point source discharges through a permitting process. *Anacostia Riverkeeper*, 798 F. Supp. 2d at 214-15 (citing *Defenders of Wildlife v. EPA*, 415 F.3d 1121, 1124 (10th Cir. 2005)). Thus, in order to address water quality concerns from all sources of pollution, the CWA requires each state to develop water quality standards for interstate waters within its border. *See* 33 U.S.C. § 1313(c). These standards supplement the NPDES permitting process. As stated in *PUD No. 1*, “these state water quality standards provide ‘a supplementary basis . . . so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels.’” 511 U.S. at 704 (quoting *EPA v. Cal. ex rel. State Water Res. Control Bd.*, 426 U.S. 200, 205 n.2 (1976)). Today, “nonpoint source pollution has become the dominant water quality problem in the United States, dwarfing all other sources of volume” *Pronsolino v. Marcus* (“*Pronsolino I*”), 91 F. Supp. 2d 1337, 1338 (N.D. Cal. 2000), *aff’d sub nom. Pronsolino v. Nastri* (“*Pronsolino II*”), 291 F.3d 1123 (9th Cir. 2002).

Water quality standards are regulations comprised of: 1) a description of the designated use or uses of a water body; 2) the criteria necessary to protect the use or uses; and 3) a statement by the applicable state that the standard will maintain and protect the existing use and the water quality of the water body. 40 C.F.R. § 131.6. “Designated use” refers to “the use and value of water for public water supplies, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation.” 40 C.F.R. § 131.10(a). In other words, water quality standards define the water quality goals of a particular body of water by setting forth “the use or uses to be made of the water and by setting criteria necessary to protect its uses.” 40 C.F.R. § 130.3. Unlike the NPDES, which focuses on mandatory effluent limitations, water quality standards focus on maintenance of the quality of the receiving water body.

The water quality criteria designed to protect the uses of the water body may be expressed as numeric criteria, articulating measurable quantities of pollutants, or as narrative statement, articulating acceptable levels of pollution in light of the designated use. 40 C.F.R. § 131.11. These state standards must be at least as protective of water quality as existing uses, 40 C.F.R. § 130.10, and are subject to EPA review, 33 U.S.C. § 1313(c).

After promulgating such standards, states are primarily responsible for monitoring progress, and identifying those waters for which the current pollution controls “are not stringent enough to implement any water quality standard applicable to such waters.” 33 U.S.C. § 1313(d)(1)(A). This list, known as a state’s “impaired waters list” or “303(d) list,” identifies waters where the water quality

goals have not been attained, deeming those areas “water quality limited segments,” or “WQLS.”

Finally, we arrive at the TMDL. The inclusion of a water body on a state’s 303(d) list triggers the statutory requirement to establish a total maximum daily load, or TMDL, for that water body. 33 U.S.C. § 1313(d)(1)(c); 40 C.F.R. § 130.7(c)(1). As set forth by EPA in its regulations, a TMDL defines the maximum amount of a pollutant that a body of water can receive from point sources, or waste load allocations (“WLAs”), and non-point sources, or load allocations (“LAs”). 40 C.F.R. § 130.2. Thus, a total TMDL is the “sum of the individual WLAs for point sources and LAs for any nonpoint sources and natural background.” *Id.* § 130.2(I).

Before EPA establishes a TMDL, or approves a state-drafted TMDL, it determines whether the state has provided a “reasonable assurance” that non-point LAs will achieve water quality standards.³ (Administrative Record (“AR”) 0000063.) EPA purports to require reasonable assurances “to be sure that WLAs and LAs established in the TMDL are not based on overly generous assumptions regarding the amount of non-point source pollution reduction that will occur.” (AR0000250.)

TMDLs are not self-implementing, but rather are informational tools utilized by EPA and the states to coordinate necessary responses to excessive pollution in order to meet applicable water quality standards. *See Anacostia Riverkeeper*, 798 F. Supp. 2d at 216 (citing *Pronsolino II*, 291 F.3d at 1129). TMDLs provide crucial information for federal, state, and local actors in furtherance

³ TMDLs involving only point sources do not require reasonable assurances because the NPDES regulatory and permitting program provide the necessary reasonable assurance that the WLAs will be achieved. (AR0000250.)

of the cooperative efforts to improve water quality as envisioned by the CWA. *See id.* at 217. Implementation mechanisms are available under other provisions of the CWA, as well as the Clean Air Act, state laws, federal and state regulations, and local ordinances. (AR0000043.) States are required to submit their lists of WQLSs and TMDLs to EPA every two years for approval. 33 U.S.C. § 1313(d)(2); 40 C.F.R. § 130.7(d)(1) & (2). States are also required to establish a priority ranking for WQLSs based on “the severity of the pollution and the uses to be made of such waters.” 33 U.S.C. § 1313(d)(1)(C). If EPA disapproves a state’s impaired waters list, priority rankings, or TMDL, EPA must assume the duty to issue such a list or TMDL, which are then incorporated into the state’s continuing planning process. 40 C.F.R. § 130.7(d)(2).

During the TMDL planning process, the seven Bay Jurisdictions were required to submit Watershed Implementation Plans (“WIPs”). The WIPs, developed pursuant to Section 117(g) of the CWA, 33 U.S.C. § 1267(g),⁴ provide roadmaps for how the Bay Jurisdictions will achieve the preliminary target loads for nitrogen, phosphorus, and sediment allocations necessary to meet the applicable water quality standards. (AR0000255; AR0023289.) EPA expects that the WIPs will identify a schedule for accomplishing nutrient and sediment load reductions, and identify programs and actions to achieve these reductions, such as adopting new regulatory authorities, improving compliance with existing regulations, securing

⁴ This section provides, in part: “The Administrator, in coordination with other members of the Chesapeake Executive Council, shall ensure that management plans are developed and implementation is begun by signatories to the Chesapeake Bay Agreement” 33 U.S.C. § 1267 (g)(1).

additional resources for cost-share programs, and issuing NPDES permits with more stringent effluent limits. (*See* AR000265.)

At this juncture, it is helpful to provide an overview of past Chesapeake Bay preservation efforts before reviewing the actions taken specifically with regard to the final TMDL.

C. Chesapeake Bay Preservation Efforts

The Chesapeake Bay TMDL is not a new or recent idea. Thus, it would be improper to view the Final TMDL in a vacuum as a single, isolated effort to restore water quality to the Chesapeake Bay. Rather, it is readily apparent from the record before this court that the Final TMDL is merely the latest effort in a long line of efforts dating back several decades to reach that end. In order to understand how and why this litigation came to be, and in order to determine whether EPA's actions were arbitrary and capricious, it is helpful to provide a history of past preservation and restoration efforts on the Bay.

To begin, it is essential to understand the physical characteristics of the Chesapeake Bay. The Chesapeake Bay is an estuary in the United States, and it has been described as one of the most biologically productive ecosystems in the world. (AR0004682.) The Bay is approximately 200 miles long and between four and 30 miles wide. (*Id.*) The water surface of the Bay encompasses more than 2,500 square miles, and the watershed, or drainage basin to the Bay, covers 64,000 square miles in Virginia, Maryland, Pennsylvania, New York, Delaware, West Virginia, and the District of Columbia. (*Id.*) Although huge in surface area, the Bay is relatively shallow, averaging 28 feet in depth. (*Id.*) There are 50 major tributaries to the Bay, the largest of which is the Susquehanna River. (*Id.*) Other major tributaries include

the Potomac, Patuxent, Rappahannock, York, James, and Choptank Rivers, as well as the West Chesapeake Drainage Area. (*Id.*) As with all estuarine systems, the water of the Chesapeake Bay is an ever-changing mixture of salt and freshwater. (AR0004685.)

The Bay and its watershed add ecological, economic, recreational, historic, and cultural value to the region. The Bay's value has been estimated by economists to exceed \$1 trillion. (AR0006969.) More than 500 million pounds of seafood, including crabs, oysters, and rockfish, are harvested from Bay waters each year. (*Id.*; AR0021459.) The Bay supports a diverse ecosystem and is home to more than 3,600 species of plants, fish, and other animals, and is a key resting ground for migratory bird species along the Atlantic Flyway. (*Id.*; AR0005417.) In light of this, Congress has recognized that the Chesapeake Bay is a "national treasure and resource of worldwide significance." (AR0021458.)

Much of the Chesapeake Bay watershed has been dramatically changed and no longer resembles what Captain John Smith encountered some 400 years ago. (AR0005509.) Indeed, for over 300 years, the Bay region has supported a number of growing economic sectors, including forestry, agriculture, and industry. (AR004691.) Population growth over the past century has dramatically impacted land use in the Bay watershed. (AR0005417.) Between 1950 and 1980, for example, the amount of developed land in the Patuxent River Basin in southern Maryland has risen from approximately three percent to over 35 percent, a number that is no doubt higher today. (AR0004692.) The intensified agricultural and forestry activities and urban development have placed a significant strain on the Bay's ecological health. (AR0004694.) In 1982, a five-year study concluded that a

rapid loss of aquatic life was due to excess nutrient runoff into the Bay, namely nitrogen and phosphorus. (AR0004725-AR0005374; AR0000050.) By 2009, more than half of the streams in the Chesapeake watershed were rated “poor” or “very poor” by the EPA. (AR0005511.) Non-point sources are the primary sources of pollutants to the Bay, with agriculture alone accounting for 44 percent of the nitrogen and phosphorus loads, and 65 percent of the sediment loads delivered to the Bay. (AR0000136.)

Efforts to improve the water quality of the Bay have been ongoing for more than 30 years. In 1983, the governors of Maryland, Virginia, and Pennsylvania, as well as the Mayor of the District of Columbia, the chairman of the Chesapeake Bay Commission, and the EPA Administrator signed the first Chesapeake Bay Agreement. (AR0000051.) This represented the first multi-state coordinated effort to restore water quality in the Bay. The signatories to the Agreement acknowledged the decline of the Bay and agreed “to assess and oversee the implementation of coordinated plans to improve and protect the water quality and living resources of the Chesapeake Bay estuarine systems.” (AR0005488-AR0005489.)

The signatories to the 1983 Agreement entered into another agreement in 1987 with the intent of establishing a more comprehensive and coordinated approach to restoring water quality in the Bay. (AR0000051.) The 1987 Agreement set a key goal to “reduce and control point and nonpoint sources of pollution to attain the water quality condition necessary to support the living resources of the Bay.” (AR0005483.) To accomplish this goal, the signatories set the first numeric goal for water quality enhancement: a 40 percent reduction in nitrogen and

phosphorus entering the Bay by 2000. (*Id.*) That same year, Congress amended Section 117 of the Clean Water Act to establish the Chesapeake Bay Program (“CBP”), directing the CBP to “coordinate state and federal efforts to improve Bay water quality, to evaluate sediment impacts on the Bay, and to determine the impact of natural and human-induced environmental changes on the living resources of the Bay.” 33 U.S.C. § 1267.

In 1991, the CBP reevaluated the progress made toward achieving the 1987 Agreement’s 40 percent nutrient reduction goal. (AR0000051.) The 1991 reevaluation contained an evaluation of progress made to that point in improving water quality, and it prescribed a detailed quantification of the original narrative goal. (*Id.*) As a result of this reevaluation, several amendments to the 1987 Bay Agreement were made in 1992. (AR0000052; AR0005478.) Based on the 1991 reevaluation, the 1992 amendments included an increased focus on the importance of the Bay’s tributaries to the goal of water quality restoration. (*Id.*) The parties to the 1987 Bay Agreement agreed to develop and begin implementation of tributary-specific strategies to meet nutrient reduction goals and improve water quality by August 1993. (AR0005479.)

In 1997, the CBP once again conducted an evaluation to determine what progress had been made toward the goal set in the 1987 Agreement of a 40 percent reduction by 2000 in nitrogen and phosphorus. (AR0000052.) The reevaluation indicated significant progress toward the nutrient reduction goals, finding that between 1985 and 1996, phosphorus loads delivered to the Bay declined by six million pounds annually, and nitrogen loads declined by 29 million pounds annually over that same period. (*Id.*) Nevertheless, the reevaluation recognized that

there was no clear improvement in dissolved oxygen levels⁵ (“DO”), and further concluded that it would be necessary to speed up implementation of nutrient reduction strategies if the goal of a 40 percent reduction by 2000 was to be met. (*Id.*)

In 1998, EPA added the mainstem and tidal tributary waters of the Chesapeake Bay to Virginia’s Section 303(d) list of impaired waters, thus triggering the statutory requirement under 33 U.S.C. § 1313(d)(1)(c) for the establishment of a TMDL for those water bodies. (AR0000063.)

On June 28, 2000, the governors of Maryland, Virginia, and Pennsylvania, as well as the Mayor of the District of Columbia, the Administrator of the EPA, and the chairman of the Chesapeake Bay Commission signed the Chesapeake 2000 Agreement. (AR0000052; AR0005417-AR0005429.) The 2000 Agreement noted that water quality protection and restoration has increasingly focused on a “tributary approach” and, for the first time, emphasized the regulatory framework of the CWA (*see supra* Section I.B) along with the cooperative efforts by the members of the CBP as the means to address nutrient enrichment problems within the Bay and its tributaries. (AR0005421-AR0005422; AR0000052-AR0000053.) Specifically, the 2000 Agreement set the overall goal of correcting nutrient- and sediment-related problems in the Bay and its tidal tributaries sufficient to remove those waters from the list of impaired waters by 2010. (AR0000053; AR0005422.) To achieve this, the agreement set specific benchmarks and

⁵ The goal of nutrient (nitrogen and phosphorus) reduction is to increase dissolved oxygen levels in Bay waters. Excessive nutrients act as fertilizer and encourage the growth of undesirable weed plants and blue-green algae. When the resulting plant growth dies off, the ensuing decay causes dissolved oxygen levels in the water to plummet, leading to anoxic conditions. Moreover, algal blooms severely limit the growth of ecologically desirable submerged aquatic vegetation. (AR0004700-AR0004701.)

established a cooperative framework between the Bay Jurisdictions (at that point including Maryland, Virginia, Pennsylvania, and the District of Columbia), whereby the Bay Jurisdictions would: (1) By 2001, define the water quality conditions necessary to protect living resources and then assess load reductions for nitrogen, phosphorus, and sediment for each major tributary; (2) By 2002, complete a public process to develop and begin implementation of revised tributary strategies to achieve and maintain the assigned loading goals; (3) By 2003, adopt new or revised water quality standards consistent with the defined water quality conditions. (AR0000053; AR0005422.) Once the Bay Jurisdictions adopted these revised standards, EPA would review the standards. Following EPA's review, the revised standards would be the basis for removing the Bay and its tributaries from the 303(d) list of impaired waters. (*Id.*)

Also in 2000, EPA, Maryland, New York, Pennsylvania, Virginia, and, for the first time, New York and Delaware, signed a Memorandum of Understanding ("MOU"). (AR0005415-AR0005416.) This multi-jurisdictional MOU once again recognized that, despite some progress, the Bay remained on the CWA's list of impaired waters and, at least insofar as this court is able to discern, mentions for the first time the establishment of a TMDL by May 2011, unless the Bay and its tributaries meet applicable water quality standards by 2010. (*Id.*) In 2002, West Virginia signed the MOU, and the parties collectively agreed to work cooperatively to achieve nutrient and sediment targets to cause the Bay and its tidal tributaries to be removed from the list of impaired waters. (AR0000053.) The MOU also called for an "inclusive, open and comprehensive public participation process" and for collaboration in the development of innovative methods to improve water quality.

(*Id.*) It is worth noting that, as with the 1983, 1987, and 2000 Bay Agreements, the signatories to the MOU included both the Bay states (Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia, District of Columbia) as well as the federal government (EPA).

In 2003, EPA and the seven Bay Jurisdictions, using the best scientific information available, established cap loads for nitrogen, phosphorus, and sediment entering the Bay. (AR0000053; AR0005397.) The goal was that the allocations would serve as the basis for each state's tributary strategy, which were scheduled to be completed in 2004. (*Id.*) Specifically, the states, the District of Columbia, and EPA agreed to cap annual nitrogen loads delivered into the Bay's tidal waters at 175 million pounds and annual phosphorus loads at 12.8 million pounds. (AR0000054; AR0005397). All parties concurred that attainment of these load reductions would eliminate the persistent anoxic conditions in the deep waters of the Bay. (AR0005398.)

As stated, in order to achieve the nitrogen, phosphorus, and sediment cap loads, the seven Bay Jurisdictions developed their own Chesapeake Bay tributary strategies. Each tributary strategy outlined river basin-specific implementation activities to reduce nitrogen, phosphorus, and sediment load from point and non-point sources with the goal of removing the Bay and its tidal tributaries from the 303(d) list of impaired waters. (AR0000054.) By way of example, in December 2004, the Pennsylvania Department of Environmental Protection issued Pennsylvania's Chesapeake Bay Tributary Strategy. (AR0024672-AR0024798.) In that document, Pennsylvania recognized that in order to meet the water quality goals set forth in the Chesapeake 2000 Agreement, reductions of 37

million pounds of nitrogen per year, 1.1 million pounds of phosphorus per year, and 116,000 tons of sediment per year were necessary. (AR0024674.) In the 119-page document, numerous strategies and recommendations were proposed to show how those goals could be met. Such strategies included: (1) limiting wastewater and industrial discharges through the NPDES permitting process; (2) upgrading sewer and water infrastructure by using \$250 million in new grants and loans that had been secured; (3) enhancing stormwater management through the NPDES permitting process; (4) accelerating dam removals and building fish passageways; (5) enacting extensive new farm management regulations through the \$13 million Preserving Agriculture, Communities, and Rural Environments (“ACRE”) initiative; (6) expanding the Conservation Reserve Enhancement Program (“CREP”); (7) increasing forested buffers and wetlands; (8) promoting manure-to-energy programs by increasing the number of methane biodigesters through programs such as the Pennsylvania Energy Harvest Grant Program, Alternative Energy Portfolio Standard, and the First Industries Farm Investment Fund; (9) establishing a market-based nutrient trading program; (10) securing conservation easements for riparian buffers; and (11) expanding the \$52 million Growing Greener II initiative. (AR0024675-AR0024675.) The Tributary Strategy contains a detailed analysis of these strategies and programs, their goals and expected effectiveness, and a cost table that estimates the total tributary strategy implementation cost to be \$703,318,063.⁶ (AR0024798.)

⁶ The purpose of this summary is not to convey a detailed understanding of Pennsylvania’s Tributary Strategy, which would be well beyond the scope of this memoranda, but rather to give the reader a sense of the types of issues and level of effort put forth by the states as members of the CBP. Similar plans were generated by Virginia (AR0024844-AR0024928), West Virginia (AR0024929-AR0024981), New York (AR0024581-AR0024671), Maryland (AR0024529-AR0024579), Delaware (AR0024419-AR0024439), and the District of Columbia (AR0024440-AR0024528).

In 2007, the seven Bay Jurisdictions reevaluated their nutrient and sediment cap loads. (AR0000055.) The 2007 reevaluation found that insufficient progress had been made toward improving water quality to a level that indicated the mainstem of the Chesapeake Bay and its tidal tributaries and embayments were no longer impaired by nitrogen, phosphorus, and sediment pollution. (*Id.*)

Coordination of the seven Bay Jurisdictions and EPA was accomplished mainly through the Principal Staff Committee (“PSC”). The PSC includes the cabinet secretaries of each Bay state’s agricultural, environmental, and natural resources departments and the EPA Region III Administrator. (AR0000055; AR0000059-AR0000060.) A management board oversees six implementation teams, the most crucial of which for the purposes of the TMDL is the Water Quality Goal Implementation Team (“WQGIT”). (*Id.*)

At a meeting of the PSC on October 1, 2007, the seven Bay Jurisdictions and EPA reached consensus that EPA would establish a Bay TMDL with a target date of 2025 when all necessary pollution control measures would be in place. (AR0000056.) Specifically, it was agreed that “The Bay watershed TMDLs will be developed jointly between the six Bay watershed states, the District and EPA and then established by EPA . . . no later than May 1, 2011.” (*Id.*; *see also Meeting Summary for the Chesapeake Bay Program Principals’ Staff Committee*, October 1, 2007, available at http://archive.chesapeakebay.net/pubs/calendar/PSC_10-01-07_Minutes_1_9029.pdf, link provided at AR0000426.)

D. Drafting the Bay TMDL

To date, more than 47,000 TMDLs have been completed throughout the United States. (AR0000018; Doc. 110 at 14 of 52, n. 3.) The Chesapeake Bay TMDL, however, is the largest and most complex TMDL thus far. (*Id.*) Between 2005 and 2010, EPA and members of the CBP met numerous times to evaluate and agree on approaches to address multiple technical aspects related to developing the Bay TMDL. (AR0000198.) By this court's count, 730 CBP committee, team, and stakeholder meetings took place during that time frame. (*See* AR0000422-AR0000454.) Of those, 639 meetings took place after the October 1, 2007 decision to have EPA issue the TMDL. Numerous meetings were held with the public including national, regional, and local stakeholders to discuss issues regarding development of TMDL models and the use of data. (*Id.*; AR0000060-AR0000062.)

Throughout 2009 up to the summer of 2010, EPA and the Bay states developed target loads for nitrogen, phosphorus, and sediment for each state.. (AR0000244.) These targets were developed based on the recognition that an equitable approach to apportionment of allowable loading among the Bay Jurisdictions was necessary. (AR0000212.) To that end, on October 23, 2009, the partners⁷ met and reached consensus on several principles to guide equitable allocation, including:

- The allocated loads should protect the living resources of the Bay and its tidal tributaries and result in all segments of the Bay mainstem, tidal tributaries, and embayments meeting [water quality standards] for [dissolved oxygen], chlorophyll, and water clarity.

⁷ The TMDL refers to the seven Bay Jurisdictions and EPA collectively as "Partners" or "the Partnership." (AR0000055.)

- Major river basins that contribute the most to the Bay water quality problems must do the most to resolve those problems (on a pound-per-pound basis).
- All tracked and reported reductions in nitrogen and phosphorous loads are credited toward achieving final assigned loads.

(*Id.*)

Applying those principles, EPA developed draft nitrogen and phosphorus target loads. By way of a letter dated November 3, 2009, EPA proposed those targets to the Bay Jurisdictions. (AR0023289-AR0023293.) On July 1, 2010 and August 13, 2010, EPA issued refined target loads as to nitrogen, phosphorus, and sediment. (AR0000244; AR0012670-AR0012682.) The Bay Jurisdictions developed their Phase I WIPs using these revised allocations. (AR0000244.)

Meanwhile, in May 2009, President Obama issued Executive Order 13508, which required seven federal agencies, led by the Administrator of the EPA, and in consultation with the Bay Jurisdictions, to develop a strategy for addressing Bay pollution and preserving Bay natural resources. (AR0006953-AR0006960.) The executive order recognized that “at the current level and scope of pollution control within the Chesapeake Bay’s watershed, restoration of the Chesapeake Bay is not expected for many years.” (AR0006953.) In calling for the development of a Bay strategy, the President acknowledged that a “renewed commitment to controlling pollution from all sources” is required. (*Id.*) The President called for a “new era of shared federal leadership with respect to restoration of the Chesapeake Bay” and required that the seven federal agencies prepare and submit reports to that end. (AR0006954.) The President also called for extensive consultation with the seven Bay Jurisdictions. (AR0006956.)

Between 2008 and 2010, EPA provided several letters to the Bay states explaining its expectations regarding each state's proposed WIP. (*See, e.g.*, AR0000255-AR0000256; AR0023294-AR0023301; AR0023289-AR0023293.) In those letters, EPA acknowledged the complexities associated with drafting WIPs and outlined a three-step process in which the WIPs would be drafted: (1) Phase I WIPs were to be submitted to EPA by September 1, 2010; (2) Phase II WIPs by November 1, 2011; and (3) Phase III WIPs by 2017. (AR0000256.) EPA would use the Phase I WIPs to support the development of specific allocations in the draft Bay TMDL. (*Id.*) The Phase II and III WIPs will be submitted after the Final TMDL is established, and will refine the actions and controls implemented to achieve applicable water quality standards. (*Id.*)

EPA conducted a "reasonable assurances" evaluation on the states' draft Phase I WIPs to see if they met expectations, in terms of (1) meeting the state's numeric target loads, and (2) providing reasonable assurance that the state's proposed source and sector allocations would be met. (AR0000257; AR0024034-AR0024054.) EPA found that many of the draft Phase I WIPs did not meet their target goal and therefore adjusted the allocations accordingly. (AR0000020.) These adjustments are referred to as "backstop" allocations. EPA then used the states' draft Phase I WIPs in conjunction with its own backstop allocations, to issue a draft TMDL. (*Id.*; AR0023773.) That TMDL was published for a 45-day public comment period from September 24 to November 8, 2010. (AR0000016.) During that time, EPA held 18 public meetings in all six states and the District of Columbia. (AR0000020.) EPA also held 15 webinars in 2010 to keep the public up to date (AR0000340) and received over 14,000 public comments from individuals as well

as agricultural, municipal, and environmental groups. (AR0000341.) EPA reviewed and responded to each comment, and, where appropriate, incorporated responses to those comments in developing the Final TMDL. (*Id.*; AR0000016.)

EPA continued working with the Bay Jurisdictions on strengthening the WIPs (AR0000025) and, upon receipt of the final Phase I WIPs, found those plans to be considerably improved compared to the draft WIPs. (AR0000263, AR0000266.) As a result, EPA was able to significantly reduce the number of backstop allocations used in the Final TMDL. In the Final TMDL, backstop measures were provided only in the three following instances: (1) making New York's WLA for wastewater sources more stringent (AR0000285-AR0000286); (2) shifting 50 percent of Pennsylvania's urban stormwater load that is not currently subject to NPDES permits from the LA category to the WLA category (AR0000287); and (3) shifting 75 percent of the pollutant loads that West Virginia allocated to animal feeding operations that are not subject to NPDES permitting from the LA category to the WLA category and signaling that EPA is prepared to designate any animal feeding operations as a source requiring a NPDES permit (AR0000292). The remainder of the Final TMDL was based on the Bay states' final Phase I WIPs, which EPA determined had satisfied the reasonable assurances analysis. On December 29, 2010, the Final Bay TMDL was issued. (AR0000015-AR00003790.) That TMDL set forth allocations of 185.9 million pounds per year (mpy) of nitrogen (representing a 25 percent reduction from current levels), 12.5 mpy of phosphorus (representing a 24 percent reduction), and 6.45 billion pounds per year of sediment (representing a 20 percent reduction) among the Bay Jurisdictions. (AR0000016.) The TMDL requires that all pollution control

measures be fully implemented by 2025, with at least 60 percent of the actions taken by 2017. (*Id.*; AR0000021.)

E. Consent Decrees, Settlement Agreements, and Memoranda of Understanding

The Chesapeake Bay TMDL has also been the subject of considerable litigation over the years. This was not always the case, however, as state and federal governments largely ignored their obligations under CWA Section 303(d) in the years after its passage. Indeed, given the complexities, costs, scientific uncertainties associated with identifying impaired waters and determining TMDLs for those water bodies, and perceived difficulties in implementing TMDLs, states were initially reluctant to undertake such efforts. Likewise, EPA largely ignored CWA Section 303(d) until environmental groups began bringing citizen's suits against EPA for inadequately implementing TMDLs as envisioned by the CWA. *See, e.g., Scott v. City of Hammond*, 741 F.2d 992 (7th Cir. 1984); *Alaska Ctr. for the Env't v. Browner*, 20 F.2d 981 (9th Cir. 1994); *Idaho Sportsmen's Coal. v. Browner*, 951 F. Supp. 962 (W.D. Wash. 1996). More relevant to the case *sub judice* are several consent decrees, MOU's, and settlement agreements involving the establishment of a TMDL for Chesapeake Bay and its tributaries. For example, in 1996, the American Littoral Society and Sierra Club filed suit against EPA due to EPA's failure to, *inter alia*, establish TMDLs for all WQLSs in Delaware, in violation of the APA and CWA. (AR0012640; *Am. Littoral Soc'y v. EPA*, Docket No. 96-cv-591 (D. Del. 1997).) The consent decree, which was reviewed and approved by the court and effectively resolved the lawsuit, called for EPA to "establish TMDLs for the balance of all pollutants for all WQLSs for which Delaware has not established TMDLs by December 15 of the year following the State's deadline, except that EPA

shall establish all such TMDLs by December 15, 2006.” (AR0012647.) In other words, the consent decree required EPA to establish TMDLs if Delaware failed to do so within the 10-year TMDL development schedule, which was attached to the decree. (AR0000066; AR0012668.)

EPA entered into a similar consent decree in *Kingman Park Civic Assoc. v. EPA*, Docket No. 1:98-CV-00758 (D.D.C. June 13, 2000). In that case, Plaintiffs Kingman Park Civic Association, Friends of the Earth, and the Anacostia Watershed Society sued EPA alleging that EPA failed to establish TMDLs for all the District of Columbia’s WQLSs, which constituted a violation of CWA Section 303(d). The court-approved consent decree required EPA to, *inter alia*, establish TMDLs for the District’s portions of the tidal Potomac and Anacostia rivers, if not first established by the District by a certain date. (AR0000066; AR0012502-AR0012526.) These rivers are tidal tributaries to the Chesapeake Bay and share common impairing pollutants (nitrogen and phosphorus). Thus, establishment of TMDLs on these rivers is directly related to the establishment of the Bay TMDL. (AR0000066.)

In 1999, EPA entered into another consent decree in *American Canoe Assoc. v. EPA*, Docket No. 98-cv-979 (E.D. Va. June 11, 1999). In that case, Plaintiffs, American Canoe Association, Inc., and the American Littoral Society, sued EPA as a result of EPA’s failure to establish a TMDL for all waters on Virginia’s Section 303(d) list. Specifically, Virginia was required to submit its Section 303(d) list and its TMDL by June 26, 1979. *See Am. Canoe Assoc. v. EPA*, 30 F. Supp. 908, 913 (E.D. Va. 1998). Virginia had failed to do so, and by the time the case was filed nearly 20 years later, had still failed to submit a TMDL. In

response to EPA's motion to dismiss, Plaintiffs argued, *inter alia*, that Virginia's failure to submit a TMDL by the 1979 deadline constituted a constructive submission that no TMDLs are required, and the CWA compelled EPA to disapprove this position as inadequate and establish a federal TMDL for Virginia's WQLSs. EPA disagreed, arguing that its duty to approve or disapprove is triggered only when the states submit their TMDL to EPA. Thus, EPA argued, because Virginia submitted no TMDL, there was no duty to disapprove and submit its own TMDL. *Id.* at 919. The court disagreed with EPA and declined to dismiss the plaintiffs' complaint on this ground, finding that "it seems highly likely that Congress intended that EPA should be required to act not only when states promulgate lists that fail to meet the standards set forth in Section 303, but also when states completely ignore their mandatory statutory responsibilities and fail to promulgate any list at all." *Id.* at 921. The suit eventually settled pursuant to a court-approved consent decree, which required EPA to establish a Bay TMDL if Virginia failed to do so by May 1, 2011, in accordance with the schedule established in the consent decree. (AR0000065; AR0012537-AR0012538.) However, as stated above, Virginia, as well as all other Bay Jurisdictions, requested in 2007 that EPA establish TMDLs for nutrient- and sediment-impaired tidal portions of the Chesapeake Bay. (AR0000056, AR0000065.)

In addition to the above consent decrees which required EPA to establish nutrient and sediment TMDLs for the Chesapeake Bay, EPA also entered into an MOU with Maryland which required the Maryland Department of the Environment to use available resources to establish and submit to EPA a TMDL for each WQLS identified in Maryland's 303(d) list by 2008 ("Maryland MOU").

(AR0012626.) This goal was somewhat superceded by the Chesapeake 2000 agreement which targeted 2010 as the year to achieve water quality standards. (AR0000067.) Accordingly, Maryland and EPA entered into a revised MOU in September 2004, that extended the schedule for TMDL development to 2011. (AR0012454-AR0012501.) Regardless, in 2007, Maryland, like all the other Bay Jurisdictions, requested that EPA take the lead in developing TMDLs for its portion of the Chesapeake Bay watershed, in essence mooted the Maryland MOU. (AR0000056; AR0000067.)

Finally, in January 2009, the Chesapeake Bay Foundation and others filed suit against EPA alleging, *inter alia*, that EPA has failed to carry out its nondiscretionary duties under Section 117(g) of the CWA, 33 U.S.C. § 1267(g), to achieve and maintain the goals of the Chesapeake Bay Agreement. (AR0000067; AR0012363; *Fowler v. EPA*, No. 1:09-C-00005-CKK (D.D.C. 2009).) In May, 2010, the parties entered into a settlement agreement whereby EPA was to establish a nutrient and sediment TMDL for the Bay and its tidal tributaries by December 31, 2010. (AR0000067; AR0012374.) In the case *sub judice*, EPA asserts that it established the Final TMDL in part to meet its commitment under that settlement agreement, and further contends that the establishment of the TMDL is consistent with EPA's duties established in the other consent decrees. (AR0000067; Doc. 100 at 18 of 76.)

The above historical recitation of the Bay TMDL development, and the legal challenges to date, are, without doubt, complicated and confounding. However, as previously stated, a familiarity with the evolution of the Bay TMDL is relevant to Plaintiffs' challenge of the Final TMDL. To simply view the Final

TMDL in a vacuum would ignore the bigger question of why this complicated regulatory procedure has been established in such a manner. With this understanding of the historical and legal context of the TMDL, the court is better positioned to address Plaintiffs' challenges.

F. Procedural History

Plaintiffs filed their initial complaint on January 10, 2011 (Doc. 1), followed by an amended complaint (Doc. 16) challenging the Bay TMDL, and seeking a declaratory judgment and injunctive relief against EPA and requesting that the court vacate the TMDL. On May 25, 2011, the CBF Group filed a motion to intervene (Doc. 25) and a brief in support on June 3, 2011 (Doc. 52). Also on May 25, 2011, the Municipal Associations Group filed a motion to intervene and brief in support. (Docs. 27 & 29.) Plaintiffs filed a consolidated response on June 20, 2011. (Doc. 57.) Reply briefs were filed by the Municipal Associations Group (Doc. 66) and the CBF Group (Doc. 67) on July 5 and July 7, 2011, respectively. On June 27, 2011, PMAA filed a motion to intervene (Doc. 59) and brief in support (Doc. 61). Plaintiffs filed a brief in opposition on July 14, 2011 (Doc. 68), to which a reply brief was filed on July 28, 2011 (Doc. 70). On October 13, 2011, the court issued a memorandum and order granting all three motions to intervene. (Doc. 87; *Am. Farm. Bureau Fed'n v. EPA*, 278 F.R.D. 98 (M.D. Pa. 2011).)

On August 26, 2011, EPA filed a notice of lodging the administrative record and a certified index to the record. (Doc. 76.) The administrative record was filed on September 1, 2011 (Doc. 77) and electronic copies of the record were sent to the court and the parties.

On October 11, 2011, Plaintiffs filed a motion to complete the administrative record and brief in support, requesting the court add additional documents to the administrative record. (Docs. 82 & 85.) Briefs in opposition were filed by EPA (Doc. 88) and Defendant-Intervenors (Doc. 89) on October 28, 2011. Plaintiffs filed a reply brief on November 14, 2011. (Doc. 91.) On December 18, 2011, the court issued a memorandum and order granting in part and denying in part the motion, permitting some of the requested documents to be added to the record. (Doc. 92.)

On January 27, 2012, Plaintiffs filed the instant motion for summary judgment and brief in support. (Docs. 95 & 96.) On March 27, 2012, EPA filed a cross-motion for summary judgment and a brief in opposition to Plaintiffs' motion for summary judgment. (Doc. 100.) On April 20, 2012, Defendant-Intervenor PMAA filed a brief in support of EPA's cross-motion for summary judgment and in opposition to Plaintiffs' motion for summary judgment. (Doc. 102.) On April 20, 2012, Defendant-Intervenor Municipal Associations Group filed its own cross-motion for summary judgment and brief in support of that motion and in opposition to Plaintiffs' motion for summary judgment. (Docs. 103 & 104.) On April 24, 2012, Defendant-Intervenor CBF Group filed a brief in support of EPA's cross-motion for summary judgment and in opposition to Plaintiffs' motion for summary judgment. (Doc. 108.) On May 21, 2012, Plaintiffs filed a brief in opposition to EPA's cross-motion for summary judgment and a reply in support of its own motion for summary judgment. (Doc. 109.) On June 20, 2012, EPA filed its brief in support of its cross-motion for summary judgment. (Doc. 110.) Reply briefs were

filed by PMAA and the Municipal Associations Group on July 13, 2012. (Docs. 115 & 116.) On July 20, 2012, the CBF Group filed its reply brief.⁸ (Doc. 122.)

Given the complexities of this case and the volume of documents in the administrative record, Plaintiffs moved for oral argument on the cross-motions for summary judgment on August 3, 2012. (Doc. 123.) EPA and Defendant-Intervenors opposed the motion. (Doc. 125.) By order dated August 10, 2012, the court granted the motion and, on October 4, 2012, the court heard oral arguments on the motions for summary judgment. Following oral argument, the court requested additional briefing on the issue of agency deference. (Doc. 138.) Briefs on this issue were filed by Plaintiffs on October 17, 2012 (Doc. 139), and by EPA and the CBF Group on October 24, 2012 (Docs. 140 & 142). Defendant-Intervenors PMAA and the Municipal Associations Group abstained from filing additional briefing. (Docs. 141 & 143.) On November 2, 2012, Plaintiffs filed a reply brief. (Doc. 146.) Thus, all issues having been fully briefed, the motion and cross-motions for summary judgment are ripe for disposition.

II. Standard

Under Federal Rule of Civil Procedure 56, summary judgment will be granted “if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). However, unlike the typical summary judgment action, Plaintiffs are seeking judicial review under the APA. While “[s]ummary judgment is the proper mechanism for

⁸ Over Plaintiffs’ objections, the court also accepted for consideration the Amicus Curiae Memorandum filed by the City of Annapolis, Maryland. (Doc. 117.)

deciding, as a matter of law, whether an agency action is supported by the administrative record and consistent with the APA standard of review[,] . . . [b]ecause . . . ‘the district judge sits as an appellate tribunal’ in such cases, the usual standard for summary judgment does not apply.” *Udin v. Mayorkas*, 862 F. Supp. 2d 391, 399-400 (E.D. Pa. 2012) (citing *Am. Bioscience, Inc. v. Thompson*, 269 F.3d 1077, 1083 (D.C. Cir. 2001); *UMPC Mercy v. Sebelius*, 793 F. Supp. 2d 62, 67 (D.D.C. 2011)); *Occidental Eng’g Co. v. I.N.S.*, 753 F.2d 766, 770 (9th Cir. 1985) (explaining that summary judgment in an original district court proceeding “is appropriate only when the court finds there is no factual issues requiring resolution by trial”; whereas, summary judgment in a case where the district court is reviewing the decision of an administrative agency under the APA “is an appropriate mechanism for deciding the legal question of whether the agency could reasonably have found the facts as it did.”).

Under the APA, a district court may only hold unlawful and set aside an agency action if it is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A). The court is required to walk a fine line of conducting a “searching and careful” inquiry into the administrative record to determine whether the agency’s decision was “based on a consideration of the relevant factors and whether there has been a clear error of judgment” while, at the same time, refraining from substituting its own judgment for that of the agency. *Citizens Advisory Comm. on Private Prisons v. Fed. Bureau of Prisons*, 197 F. Supp. 2d 226, 240 (W.D. Pa. 2001) (quoting *Citizens to Protect Overton Park, Inc. v. Volpe*, 401 U.S. 402, 415-17 (1971) and *Soc’y Hill Towers Owners’ Ass’n v. Rendell*, 201 F.3d 168, 178 (3d Cir. 2000)). Even an agency “decision of less than

ideal clarity” should be upheld “if the agency’s path may be reasonably discerned.” *Anacostia Riverkeeper*, 798 F. Supp. 2d at 222 (quoting *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)). At the same time, it is “an axiom of administrative law that an agency’s explanation of the basis for its decision must include a rational connection between the facts and the choice made.” *Id.* (quoting *Bowen v. Am. Hosp. Ass’n*, 476 U.S. 610, 626 (1986)). It has been repeatedly stated that “the focal point for judicial review should be the administrative record already in existence, not some new record made initially in the reviewing court.” *United States v. Keystone Sanitation Co.*, 1996 U.S. Dist. LEXIS 22808, *10 (M.D. Pa. Aug. 27, 1996) (quoting *Camp v. Pitts*, 411 U.S. 138, 142 (1973)). The “whole record” consists of materials either directly or indirectly considered by the decision maker. *Keystone Sanitation*, 1996 U.S. Dist. LEXIS 22808, *23 n.6 (citing *Wade v. Dole*, 631 F. Supp. 1100, 1107 (N.D. Ill. 1986), *aff’d* 813 F.2d 798 (7th Cir. 1987)); *see also Bar MK Ranches v. Yuetter*, 994 F.2d 735, 739 (10th Cir. 1993); *Ohio Valley Envtl. Coal. v. Whitman*, 2003 U.S. Dist. LEXIS 148, *8 (S.D. W.Va. Jan. 6, 2003). “An agency’s action is entitled to a presumption of validity, and the petitioner challenging that action bears the burden of establishing that the action is arbitrary or capricious.” *Forest Guardians v. U.S. Fish & Wildlife Serv.*, 611 F.3d 692, 704 (10th Cir. 2010); *see also Taggart v. GMAC Mortg., LLC*, 2013 U.S. Dist. LEXIS 113823 *10 n.6 (E.D. Pa. Aug. 12, 2013).

The court owes *Chevron* deference to the extent that EPA’s actions are based on an interpretation of statutory language. All parties are in agreement that the applicable analysis is the two-step analysis set forth in *Chevron, USA, Inc. v.*

Natural Res. Def. Council, 467 U.S. 837, 842 (1984).⁹ Under *Chevron*, an agency's interpretation is entitled to deference if "Congress delegated authority to the agency generally to make rules carrying the force of law, and . . . the agency interpretation claiming deference was promulgated in the exercise of the authority." *United States v. Mead*, 533 U.S. 218, 226-27 (2001). If a court finds *Chevron* deference applies, the court must first ask "whether Congress has directly spoken to the precise question at issue." *Id.* "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. Second, a court asks whether, if the statute is ambiguous, the agency has rendered "a permissible construction." *Id.* at 843.

A court is more likely to find the agency's interpretation permissible if there is a "complex and highly technical regulatory program," *Robert Wood Johnson Univ. Hosp. v. Thompson*, 297 F.3d 273, 282 (3d Cir. 2002) (citations and quotations omitted), or if the agency has employed formal procedures, such as notice and comment rulemaking, *see Christensen v. Harris Cnty.*, 529 U.S. 576, 587 (2000). If *Chevron* deference applies, the court must defer to the agency's interpretation as long as it is reasonably consistent with the statute. *See Mead*, 533 U.S. at 229. Where a court declines to extend *Chevron* deference, it may nonetheless extend the lesser degree of deference set forth in *Skidmore v. Swift &*

⁹ Although Plaintiffs did not believe *Chevron* deference should be applicable "in the context of an agency interpreting a statute to determine the limits of its own jurisdiction," Plaintiffs conceded that the Third Circuit has held that it is applicable. (Doc. 139, n. 3 (citing *NE Hub Partners, L.P. v. CGN Transmission Corp.*, 239 F.3d 333, 355 (3d Cir. 2001).)

Co., 323 U.S. 134 (1944)).¹⁰ However, the court is in agreement with the parties that *Chevron* deference is appropriate in this case. *See Pronsolino II*, 291 F.3d at 1131 (finding *Chevron* deference applicable in a TMDL case because the “EPA has the statutory authority to enact a rule carrying force of law [in a TMDL case because]” the CWA delegates to EPA the general rule-making authority necessary for the agency to carry out its functions under the Act).

III. Discussion

Plaintiffs put forward various arguments in support of vacating the Bay TMDL. As a preliminary matter, however, the court will address EPA’s argument that Plaintiffs lack standing to bring suit. The court will then address each of Plaintiffs’ arguments *ad seriatum*.

A. EPA’s Standing Argument

EPA argues for the first time in its memorandum in support of its cross-motion for summary judgment (Doc. 100) that Plaintiffs lack standing to bring suit under Article III of the Constitution. Article III limits the federal courts to adjudication of actual “[c]ases” and “[c]ontroversies.” U.S. Const. Art. III, § 2, cl. 1. “Standing circumscribes the federal judicial power by requiring a litigant to show that it is entitled to have the court decide the merits of its case.” *Am. Auto. Ins. Co. v. Murray*, 658 F.3d 311, 317 (3d Cir. 2011) (citing *Allen v. Wright*, 468 U.S. 737, 750-51 (1984)). The three constitutional elements of standing are: (1) an “injury in fact,” that is, a concrete and particularized invasion of a legally protected interest

¹⁰ Under *Skidmore*, a court defers to an agency’s position according to its persuasiveness. 323 U.S. 139-140. Factors relevant to this analysis include the agency’s expertise, care, consistency, and formality, as well as the logic of the agency’s position. *Id.*

that is actual or imminent, not conjectural or hypothetical; (2) causation, the showing of a fairly traceable connection between the alleged injury in fact and the alleged conduct of the defendant; and (3) redressability, that is, “it must be ‘likely,’ as opposed to merely ‘speculative,’ that the injury will be ‘redressed by a favorable decision.’” *Id.* (quoting *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992)).

The import of EPA’s argument in this regard is that Plaintiffs failed to submit affidavits or set forth any evidence to establish the requisite elements of representational standing. In response to this argument, Plaintiffs, in their brief in opposition to EPA’s cross-motion, attached 13 declarations which contain statements pertaining to the various Plaintiffs’ standing in this case. (Docs. 109-1 – 109-13.) EPA nevertheless argues in its reply brief that such affidavits must be submitted “at the first appropriate point in the review proceeding,” in this case Plaintiffs’ opening brief, and that Plaintiffs produced no reason to excuse the untimely filing of the declarations. (Doc. 110 at 10 of 52 (citing *Communities Against Runway Expansion, Inc. v. FAA*, 355 F.3d 678, 684 (D.C. Cir 2004) (“*CARE*”).)

The court rejects EPA’s argument. First, while it is true that at the summary judgment stage, a plaintiff may not base standing on mere allegations and must set forth by affidavit or other evidence of “specific facts” to support standing, *see Sierra Club v. EPA*, 292 F.3d 895, 900 (D.C. Cir. 2002), there is no hard and fast rule that failure to attach said affidavits to an opening brief automatically divests a plaintiff of Article III standing, and thus the court of subject matter jurisdiction. Indeed, in *CARE*, a case relied upon by EPA, the court readily excused the plaintiff’s

belated submission of declarations regarding standing, where, like here, the declarations were not filed concurrent with the opening brief. 355 F.3d at 685. The court found that the supplemental declarations clearly demonstrated “injury in fact” sufficient for standing purposes, and further found that the agency was not prejudiced because it was permitted to respond to the declarations. *Id.*

Here, too, EPA’s prejudice is limited because it was able to respond to Plaintiffs’ declarations in its reply brief, wherein EPA merely restates its untimeliness argument. (Doc. 110 at 10-11 of 52.) Moreover, the affidavits were not filed egregiously late in the proceedings. Indeed, the first time standing was even challenged was in EPA’s memorandum in support of its cross-motion. This was not a case where a preliminary motion to dismiss for lack of standing was filed. Nor was this a case where a plaintiff did not submit any evidence regarding standing until its final brief, thus requiring post-argument supplementation, as in *Sierra Club*. Rather, the court finds Plaintiffs’ standing to seek review of this administrative action to be self-evident. As stated by the court in *Sierra Club*,

[I]n many, if not most cases the petitioner’s standing to seek review of administrative action is self-evident; no evidence outside the administrative record is necessary for the court to be sure of it. In particular, if the complainant is “an object of the action . . . at issue” – as is the case usually in review of a rulemaking and nearly always in review of an adjudication – there should be “little question that the action or inaction has caused him injury, and that judgment preventing or requiring the action will redress it.”

Sierra Club, 292 F.3d at 899-900 (quoting *Lujan*, 504 U.S. at 561-62.) Here, the declarations make clear that Plaintiffs are the object of the action, and that they will incur economic injury if required to comply with the TMDL. For example, some of the Plaintiffs are point source dischargers and are NPDES permit holders who will

need to comply with the standards set forth in the Bay TMDL. (*See, e.g.*, Doc. 109-1, Shafer Decl. ¶¶ 6, 8, 10 (“Pilgrim’s Pride [a member of the U.S. Poultry & Egg Association] has determined that in order to comply with the individual wasteload allocations in the TMDL, it will need to change its wastewater treatment operations [and] employ new treatment technology [which will be] prohibitively expensive for most businesses and municipalities.”); Doc. 109-2, Igli Decl. (“Each Tyson [(member of U.S. Poultry & Egg Association)] facilit[y] operates a wastewater treatment plant [and] holds a [NPDES] permit. [To meet the requirements of the Bay TMDL] will require additional costs to achieve compliance. Tyson also expects increases in operating costs associated with all facilities.”).) Other declarations contain similar concerns and declarations of economic injuries. (*See* Doc. 109-3, Behrer Decl. ¶¶ 12-14 (describing economic harm from changes to dairy operations that a farm needs to undertake to comply with “aggregate” WLAs); Doc. 109-4, Kettler Decl. ¶¶ 11-14, 16 (describing costs of complying with the Final TMDL as including engineering and planning work to develop stormwater pollution control plans, installation of systems to treat and control stormwater, and implementation and maintenance measures); Doc. 109-5, Sowers Decl. ¶¶ 8-15 (same); Doc. 109-6, Herz Decl. ¶¶ 5-8 (describing how the Final TMDL will increase the cost of complying with discharge limitations and result in reduced fertilizer sales); Doc. 109-7, Doggett Decl., ¶¶ 4, 6 (describing how pollutant allocations in the Final TMDL will increase already significant costs associated with nutrient management plans for corn farms).) It has long been held that economic injuries are a sufficient

basis for standing. *See Clinton v. City of N.Y.*, 524 U.S. 417, 434-33 (1998); *see also Sierra Club v. Morton*, 405 U.S. 727, 733-34 (1972).¹¹

Moreover, based on a review of the declarations, the court has no trouble concluding that the causation and redressability requirements are also satisfied. CBF argues that the Final TMDL is not the cause of Plaintiffs' injuries because the TMDL is not self-implementing; rather, the TMDL is implemented by the states. This view is too restrictive. A TMDL, while only informational in nature, is, in this case, the product of extensive collaboration between the Bay states and EPA. The TMDL was used by the states to construct the WIPs, which are the cause of the alleged injuries. Moreover, EPA's role is not purely passive: EPA is the permitting authority for point source pollution, via NPDES permitting. In short, if the court were to adopt CBF's argument, then ostensibly no party, including environmental groups, regulated entities, or trade groups, would ever have standing to challenge a TMDL in federal court as either insufficiently protective or in excess of EPA's regulatory authority. Yet, many courts have asserted jurisdiction over such cases. *See, e.g., Natural Res. Def. Council, Inc. v. Muszynski*, 268 F.3d 91 (2d Cir. 2001); *Dioxin/Organochlorine Ctr. v. Clarke*, 57 F.3d 1517 (9th Cir. 1995); *Anacostia Riverkeeper*, 798 F. Supp. 2d 210. Accordingly, the court finds that Plaintiffs' alleged imminent injuries are fairly traceable to the Final TMDL, and thus causation is satisfied.

¹¹ Defendant-Intervenor CBF also argues that the alleged injuries are speculative and not sufficiently imminent. (Doc. 108 at 17 of 39.) While it is true that the concept of imminence is elastic, it should not be "stretched beyond the breaking point" by only alleging an injury "at some indefinite time in the future." *Lujan*, 504 U.S. at 564 n. 2. The court does not find that the alleged economic injury is so speculative. Plaintiffs, through the various declarations, state that, if the Final TMDL is upheld, then economic injury will result as a result of the reduced nutrient allocations. Although this injury might not be present or immediate, it is sufficiently imminent for the purposes of Article III standing.

Lastly, the court finds that the requested relief, vacatur of the Final TMDL, would likely relieve Plaintiffs of their alleged injuries. Redressability is closely related to traceability, except that traceability looks backward (did the defendants cause the harm?), while redressability looks forward (will a favorable decision alleviate the harm?). *See Toll Bros., Inc. v. Twp. of Readington*, 555 F.3d 131, 143 (3d Cir. 2009) (citing *Lujan*, 504 U.S. at 560-61). Plaintiffs need not show that a favorable decision will certainly redress their members' injuries, only that it is likely to do so. *Id.* Here, based on the above, the court is satisfied that Plaintiffs have met the redressability prong, as vacatur of the TMDL will likely alleviate at least some of Plaintiffs' economic concerns.

In short, Plaintiffs have satisfied the test for Article III standing: injury-in-fact, causation, and redressability. That the declarations providing evidence in support of Plaintiffs' standing were not filed in the opening brief, but rather in their opposition brief to Plaintiffs' cross-motion, is not fatal to Plaintiffs' standing.

B. Bay TMDL is not an unlawful federal implementation plan

In this issue of first impression, Plaintiffs argue that the Final TMDL represents an unlawful federal implementation because it impedes on the states' rights to implement the TMDL as each state sees fit. Plaintiffs assert that, while EPA may *issue* a TMDL, EPA has no authority to *implement* a TMDL. Plaintiffs further argue that only Congress can grant EPA authority to implement TMDLs, and no executive order, consent decree, or MOU can expand EPA's authority. Plaintiffs point to the level of detail of TMDL allocations, as well as EPA's backstop measures as evidence of unlawful federal implementation measures. For the reasons set forth below, the court agrees with Plaintiffs that TMDL implementation

responsibilities primarily fall to the individual states, but disagrees that the Final TMDL represents an unlawful implementation plan.

1. CWA §§ 303 (33 U.S.C. § 1313) and 117 (33 U.S.C. § 1267)

As explained in detail above, the CWA sets forth a step-by-step approach to restoring impaired waters. *See supra* Section I.B. To review, the CWA first requires the establishment of water quality standards. 33 U.S.C. § 1313(a) & (c). Second, states are required to identify waters that do not meet those standards (the “303(d) list”). 33 U.S.C. § 1313(d). Third, states must establish TMDLs, subject to EPA approval, for those waters at levels necessary to achieve the standards. *Id.* Finally, states are required to submit plans (the “continuing planning process”), subject to EPA approval, which are designed to achieve the water quality standards. 33 U.S.C. § 1313(e).

Plaintiffs concede that, while states have primary responsibility for establishing water quality standards, 303(d) lists, and TMDLs, EPA is authorized to take action in the event of state inaction or insufficient action. *See* 33 U.S.C. § 1313 (c) (authorizing EPA to establish water quality standards where it is determined that the state standards are inconsistent with the CWA); 33 U.S.C. § 1313(d) (authorizing EPA to establish TMDLs where it is determined that the proposed state TMDL will not achieve water quality standards); 33 U.S.C. § 1313(e) (authorizing EPA to review each state’s continuing planning process and disapprove of any state permit program for any state that does not have an approved continuing planning process). (Doc. 96 at 40 of 81.) Plaintiffs nevertheless argue that states have *exclusive* authority over the final step in this process: implementation of the TMDL

allocations. (*Id.*) Having reviewed the applicable statutory provisions, the court finds that this argument is overbroad.

TMDL implementation, as is evident from the analysis below, is an amorphous term. Practically speaking, TMDL “implementation” is divided between EPA and states. *See Sierra Club v. Meiburg*, 296 F.3d 1021 (11th Cir. 2002). For example, point-source discharges are regulated through the federal NPDES permitting regime, with TMDLs incorporated into the effluent and technology-based limitations. 33 U.S.C. §§ 1311(b)(1)(C), 1342(d)(3); 40 C.F.R. § 122.44(d)(1)(vii)(B). These permits may be issued either by EPA, or by states with EPA-approved NPDES programs. However, even where EPA has delegated permitting authority to the states, EPA retains the right to include additional limits in NPDES permits when necessary to ensure achievement of water quality. 33 U.S.C. § 1312(a), 1342(a). Non-point source regulation, however, is generally left to the states. 33 U.S.C. § 1329.¹² Nevertheless, EPA can influence state implementation by providing grant money for state non-point source pollution management programs. 33 U.S.C. §§ 1311(b)(1)(C), 1342(d)(2). Thus, to say that implementation is left *exclusively* to the states would be an overstatement.

Plaintiffs’ exclusivity argument is based on CWA Section 303(e), which requires that states prepare a “continuing planning process” (“CPP”). 33 U.S.C. § 1313(e)(2). These CPPs include TMDLs for pollutants, as well as effluent limitations and standards, revision procedures, and adequate implementation

¹² This section requires states to prepare a non-point source management plan, 33 U.S.C. § 1329(a), and a management program that identifies “best management practice and measures,” 33 U.S.C. § 1329(b). “EPA exercises authority over these programs and must approve them.” *Meiberg*, 296 F.3d at 1026. Once a management program is approved, EPA may make grants to the states to allow them to implement the plan. 33 U.S.C. § 1329(h).

measures including a schedule for compliance. *Id.* at 1313(e)(3). Plaintiffs note that Section 303(e) does not confer backstop authority to EPA or permit EPA to otherwise take over state implementation plans. (Doc. 96 at 40-42 of 81.) Plaintiffs contrast this section with Section 303(c) and (d) which, as state above, permit EPA to establish water quality standards and TMDLs, respectively, wherever state efforts fall short. (*Id.* at 41 of 81.)

After reviewing Section 303(e), the court agrees that EPA is not authorized to establish or otherwise take over TMDL implementation plans. However, here again, it would go too far to say that EPA has no role in developing state implementation plans. In fact, EPA is required to review and approve or disapprove each state's CPP, and, once its process has been approved, occasionally review it to ensure that it stays consistent with the Act. 33 U.S.C. § 1313(e)(2). Thus, here too, EPA has supervisory authority. EPA's supervisory authority is consistent with the CWA's requirement that EPA "ensure that management plans are developed and implementation is begun by signatories to the Chesapeake Bay Agreement to achieve and maintain . . . the nutrient goals of the Chesapeake Bay Agreement . . . [and] the water quality requirements necessary to restore living resources to the Chesapeake Bay ecosystem." 33 U.S.C. § 1267(g). Nevertheless, Plaintiffs are correct that Section 303(e) stops short of giving EPA authority to enact its own implementation plan where it has determined that the state's effort has fallen short. EPA may not, for example, dictate to a state what measures the state must undertake to reduce pollution from a particular source.

In the end, the parties do not have any real dispute in this regard. Both Plaintiffs and EPA acknowledge that EPA is authorized under the CWA to take

action regarding water quality standards and establishment of TMDLs if the states' efforts fall short. (*See* Doc. 96 at 40 of 81; Doc. 100 at 15-16 of 76.) It is further undisputed, despite Plaintiffs' claim that implementation is left exclusively to the states, that EPA's implementation authority is limited to its authority over NPDES permitting for point sources, and providing or withholding grant money to encourage implementation for non-point sources.¹³ It is logical for states to retain control over implementation of non-point pollution regulation because non-point pollution control measures often involve local land use and zoning decisions, activities which are generally within the well-protected province of state and local government.

Nevertheless, Plaintiffs claim that EPA unlawfully impinged on the Bay states' implementation authority when issuing the Final TMDL. Specifically, Plaintiffs argue that EPA violated the CWA because (1) the Final TMDL contains detailed allocations rendering the TMDL tantamount to an implementation plan, (2) EPA unlawfully imposed "backstop" adjustments, and (3) EPA unlawfully locked-in those allocations by establishing a federal timeline for implementation and reserving exclusive authority to revise them. Plaintiffs further claim that EPA violated the CWA by requiring "reasonable assurances" of the Bay states' WIPs and by providing allocations for "upstream" states (the headwater jurisdictions of New York, Pennsylvania, and West Virginia). The court will address each argument.

¹³ In *Pronsolino II*, the court noted that this sort of "carrot-and-stick" approach is central to attaining acceptable water quality without direct federal regulation of non-point sources of pollution. 291 F.3d at 1127. The court further explained that the advantage of the "intricate scheme is that the CWA leaves to the states the responsibility of developing plans to achieve water quality standards if the statutorily-mandated point source controls will not alone suffice, while providing federal funding to aid in the implementation of the state plans." *Id.* at 1128 (citations omitted).

2. Detailed Allocations

Plaintiffs initially argue that the high level of detail in the TMDL's allocations constrains the states implementation powers. (Doc. 96 at 29 of 81.) Specifically, Plaintiffs state that "[a]lthough implementation of TMDLs involves difficult policy choices concerning land use and regulation that are left to the states under the CWA, EPA's allocations in the TMDL micro-manage implementation by dictating the distribution of loadings among numerous source categories and even individual sources throughout the watershed." (*Id.* at 28 of 81.) Plaintiffs note that EPA established annual and daily WLAs for specific sectors, such as regulated agriculture, regulated stormwater, and wastewater and for 478 individual permitted facilities throughout the seven Bay Jurisdictions. (*Id.* at 28-29 of 81.) At oral argument, Plaintiffs argued that "the amount of regulation of individual sources, the extent of those allocations is unprecedented[ed]." (Notes of Transcript ("Tr.") 36.)¹⁴

The court does not find that the level of detail associated with allocations renders the TMDL a *de facto* implementation plan. Plaintiffs themselves seemingly concede this point, stating that "EPA violated the CWA *not by referencing detailed allocations in the TMDL*, but by locking those allocations in, establishing a federal timeline for implementation, and reserving exclusive authority to revise them." (Doc. 109 at 23 of 56) (emphasis added.) Nevertheless, at oral argument, Plaintiffs reiterated their argument that by first dividing the allocations in WLAs and LAs and then further dividing allocations among various sectors,

¹⁴ The court reporter provided the court with a preliminary copy of the transcript of proceedings on October 4, 2012. A final transcript has not been requested by any party. Any citations to the transcript refer to the court's copy of the preliminary transcript and, therefore, may contain different pagination to a final transcript, in the event that one is requested.

including agriculture, stormwater, wastewater, forest, non-tidal atmospheric deposition, onsite septic and urban, EPA was essentially divesting the states of the ability to split the allocations as they saw fit, thus restricting the scope of their implementation powers.¹⁵ (Tr. 32; Doc. 96 at 29 of 81.)

As explained below, the court disagrees that allocations, by virtue of their level of detail, have converted the Final TMDL into an unlawful federal implementation plan.

a. WLAs and LAs

Plaintiffs argue that the regulation establishing a TMDL as the *sum* of WLAs from point sources and LAs from non-point sources, *see* 40 C.F.R. § 130.2, is in violation of the CWA because the CWA only authorizes EPA to establish the *total* maximum daily load. (Doc. 96 at 21 of 81; Doc. 139 at 6 of 12.) In other words, Plaintiffs interpret the CWA to authorize EPA to establish a single total load for a state for a particular pollutant, but not to authorize EPA to allocate that total load or otherwise determine how the total load is to be achieved. (Doc. 139 at 6 of 12.) Thus, the question, which appears to be an issue of first impression, is whether EPA exceeded its authority under the CWA by defining a TMDL as “[t]he sum of

¹⁵ Here again, Plaintiffs seemingly contradicted themselves by subsequently stating at oral argument that the detail of the allocation is not at issue in the following exchange:

THE COURT: You don’t object to the detail of the allocations, you object to the fact that you claim they’re locked in?

MR. SCHWARTZ: That’s correct. If they’re not locked in, then that actually changes the equation.

(Tr. 7.)

the individual WLAs for point sources and LAs for non point sources and natural background.” 40 C.F.R. § 130.2. The court finds that it did not.

Plaintiffs’ argument in this regard is limited to the reservations of state authority in 33 U.S.C. § 1251(b) and § 1370. Section 1251(b) provides as follows:

(b) Congressional recognition, preservation, and protection of primary responsibilities of States. It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use . . . of land and water resources, and to consult with the Administrator in the exercise of authority under this Act. It is the policy of Congress that the States manage the construction grant program under this Act and implement the permit programs under sections 402 and 404 of this Act. It is further the policy of Congress to support and aid research relating to the prevention, reduction, and elimination of pollution, and to provide Federal technical services and financial aid to State and interstate agencies and municipalities in connection with the prevention, reduction, and elimination of pollution.

33 U.S.C. § 1251(b). Section 1370 provides:

§ 1370. State Authority

Except as expressly provided in this Act, nothing in this Act shall (1) preclude or deny the right of any State or political subdivision thereof or interstate agency to adopt or enforce (A) any standard or limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution; except that if an effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance is in effect under this Act, such State or political subdivision or interstate agency may not adopt or enforce any effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance which is less stringent than the effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance under this Act; or (2) be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters (including boundary waters) of such States.

33 U.S.C. § 1370. Thus, Section 1251 contains broad Congressional policy statements, and Section 1370 requires states to meet minimum federal effluent limitations standards. Interestingly, although both sections address state authority, neither section addresses the issues of TMDLs and whether a TMDL may consist of both WLAs and LAs. There is nothing in these sections that explicitly prohibits defining a TMDL as the sum of WLAs and LAs. At the same time, the CWA does not expressly define a TMDL as a sum of WLAs and LAs, instead describing a TMDL as the “the total maximum daily load, for those pollutants which the administrator identified under Section 304(a)(2) [33 U.S.C. § 1314(a)(2)] . . . to implement the applicable water quality standards.” 33 U.S.C. § 1313(d)(1)(C).¹⁶

Clearly, the CWA leaves room for interpretation when defining a TMDL. EPA, while conceding that there is no statutory mention of WLAs and LAs, has determined that it is necessary to include both WLAs and LAs in order to effectuate the overall goal of achieving water quality standards. Specifically, EPA has determined that:

Although section 303(d)(2) of the Act does not specifically mention either WLAs or LAs, it is impossible to evaluate whether a TMDL is technically sound and whether it will be able to achieve standards without evaluating component WLAs and LAs and how these loads were calculated. Thus, it is necessary for EPA to review and approve or

¹⁶ CWA § 304(a)(2) simply states that “[t]he Administrator, after consultation with appropriate Federal and State agencies . . . shall develop and publish information . . . on the identification of pollutants suitable for maximum daily load measurement correlated with the achievement of water quality objectives.” 33 U.S.C. § 1314. This is not at issue here because Plaintiffs are not challenging suitability of regulating nitrogen, phosphorus, or sediments to achieve water quality objectives. In any event, EPA issued its final identification of pollutants subject to TMDL regulation on December 28, 1978, wherein EPA did not identify any specific pollutants by name, but simply identified “all pollutants, under proper technical conditions, as being suitable for the calculation of total maximum daily loads.” 43 Fed. Reg. 60662.

disapprove a TMDL in conjunction with component WLAs and LAs.

50 Fed. Reg. 1775 (Jan. 11, 1985).

Plaintiffs argue that this interpretation is not entitled to *Chevron* deference because there is no ambiguity in the statutory language at issue. (Doc. 139 at 3-6.) In support, Plaintiffs reiterate that the CWA authorizes EPA to establish the *total* maximum daily load, but does not otherwise authorize EPA to allocate that total load among sources, and the statute's silence on the matter does not prove ambiguity. (*Id.*) The court disagrees.

As stated above, under the *Chevron* standard, where the court finds that the statute is open or ambiguous – that is, if Congress left a “gap” for the agency to fill – then this court must uphold the agency's interpretation so long as it is “reasonable.” Moreover, that silence does not prove ambiguity is besides the point because the court in *Chevron* held that where “the statute *is silent or* ambiguous with respect to a specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute.” 467 U.S. at 843.

The court finds the statutory provisions at issue are precisely the type that Congress intended to leave to EPA for interpretation. For one, there is no question that the calculation of a TMDL is a “highly technical, specialized interstitial matter that Congress does not often decide itself, but delegates to specialized agencies to decide.” *Zuni Pub. Sch. Dist. v. Dep't of Educ.*, 550 U.S. 81, 90 (2007). Second, there is no dispute that Congress was silent as to the precise variables attributable to a TMDL, defining a TMDL only as the load necessary “to implement the applicable water quality standards.” 33 U.S.C. § 1313(d)(1)(C). Third, the statutory language itself supports EPA involvement in interpreting the

statute. *See* 33 U.S.C. § 1313(d)(1)(c) (defining a TMDL as “the total maximum daily load, for those pollutants which *the Administrator* identified under Section 304(a)(2) [33 U.S.C. § 1314(a)(2)] . . . to implement the applicable water quality standards.” (emphasis added)); *see also* 33 U.S.C. § 1314(a)(2) (“*The Administrator* . . . shall develop and publish . . . the identification of pollutants suitable for maximum daily load measurement” (emphasis added)).

EPA’s position also finds support in the courts. Although neither the parties nor the court has been able to identify any case where a plaintiff specifically challenged EPA’s definition of a TMDL as the sum of WLAs and LAs plus natural background, courts have nevertheless cited to that provision numerous times without issue. For example, in *Anacostia Riverkeeper v. Jackson*, 798 F. Supp. 2d 210 (D.D.C. 2011), the court set aside a TMDL for the Anacostia River that sought to reduce sediments and total suspended solids (TSS) by 85 percent. The court found that while the proposed reduction was designed to ensure *some* of the water quality standards for the river’s designated uses – namely protection of plant and animal life – it did not consider the reduction required to protect *all* the water’s designated uses, which also included water contact recreation (*e.g.*, swimming), secondary contact recreation (*e.g.*, boating), and aesthetic enjoyment. The TMDL at issue contained both WLAs and LAs. The court noted that:

A core requirement of any TMDL is to divide sources of contamination along the water body by specifying load allocations, or LAs, to predict inflows of pollution from particular non-point sources; and to then set[] wasteload allocations, or WLAs, to allocate daily caps among each point source of pollution.

Id. at 248-49. Neither the court, nor any party, took issue with this requirement.

In *Pronsolino I*, the district court resolved a challenge to the TMDL for the Garcia River in northern California. 91 F. Supp. 2d 1337. In that case, the Pronsolinos, landowners in the Garcia River watershed, challenged the TMDL on the grounds that the CWA does not authorize EPA to determine a TMDL for rivers and waters polluted only by non-point sources. The plaintiffs argued that the TMDL requirements of Section 303(d) were reserved exclusively for point sources, largely because that section makes no mention of non-point sources.¹⁷ The court disagreed, holding that a TMDL is applicable to “all pollutants,” which includes both point and non-point sources. The court looked to Ninth Circuit case law, wherein the court found support for the defendant’s view that TMDLs are applicable to both point and non-point sources. *Id.* at 1348-49 (quoting *Alaska Ctr. for the Env’t v. Browner*, 20 F.3d 981, 985 (9th Cir. 1994) (“Congress and EPA have already determined that establishing TMDLs is an effective tool for achieving water quality standards in waters impacted by non-point source pollution.”); and *Dioxin/Organochlorine Ctr. v. Clarke*, 57 F.3d 1517, 1520 (9th Cir. 1995) (“A TMDL defines the specific maximum amount of a pollutant which can be discharged or ‘loaded’ into the waters at issue from all combined sources. Thus a TMDL represents the cumulative total of ‘load allocations’ which are in turn best estimates of the discrete loading attributed to nonpoint sources, natural background sources, and individual wasteload allocations . . . , that is, specific portions of the total load allocated to individual

¹⁷ As previously stated, Section 303(d) requires states to identify and compile a list of waters for which certain “effluent limitations” are not stringent enough to meet applicable water quality standards (*e.g.*, the aforementioned 303(d) list). 33 U.S.C. § 1313(d)(1). Effluent limitations pertain only to point sources. This was the basis of the plaintiff’s challenge, which is distinguishable from Plaintiffs’ challenge in this case, wherein EPA’s ability to allocate as between WLAs and LAs is challenged on the basis that the CWA only authorizes EPA to set the allocation as a single, cumulative number.

point sources.”)). The court concluded that, “[i]n the face of these statements, it would be difficult for a district court within the Ninth Circuit to hold that TMDLs were not required for listed rivers and waters harmed only by nonpoint pollution.” *Id.* at 1349.

The court also looked to the legislative history of Section 303(d), finding that although the legislative history focused on effluent limitations for point sources, it also recognized that “non-point sources of pollution are a major contribution to water quality problems.” *Id.* at 1350. The court interpreted this statement as Congress’ recognition that non-point pollution would also be required to meet water quality standards. *Id.*

Additionally, the court looked to CWA Section 304(a)(2) which states that TMDLs are obligatory only for those “pollutants” which the Administrator identifies under Section 304(a) as suitable for calculation. As stated, EPA identified “all pollutants” as being suitable for TMDL calculation. *See supra* note 16. The question, then, was whether sediment, the non-point source at issue, constituted a “pollutant” even though it was not identified as a pollutant under the Act’s definition of “pollutant,” which states “[t]he term ‘pollutant’ means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive wastes, heat wrecked or discarded equipment, rock, sand, cellar dirt[,] and industrial, municipal, and agricultural waste discharged into water.” 33 U.S.C. § 1362; 40 § C.F.R. 122.2. Nevertheless, the court found that sediment was a “pollutant,” in part based on Ninth Circuit case law, and in part based on legislative history, which referenced sediment as a “pollutant.” 91 F. Supp. 2d at 1351 (citing S. Rep. No. 92-414, 92 Cong. 1st Sess. 52

(1971)(“sediment, often associated with agricultural activities, is by volume our major pollutant”)). The court also looked to other sections in the CWA which referred to “non-point sources” as “pollutants.” *Id.* at 352 (citing CWA §§ 105(d), 304(e), and 305(b)(1)(E)). Thus, the court concluded that the “operative language of the Act . . . expressly treated pollutants as emanating from nonpoint sources” and thus non-point sources were “pollutants” subject to TMDLs. *Id.* at 1351-52.

In holding that TMDLs applied to non-point sources of pollution (as well as point sources), the court stated broadly that this view was in line with the “comprehensive fabric” of the Act. *Id.* at 1352. Further, any remaining doubt, the court stated, should be eliminated by deference to EPA’s reasonable construction of the statute. *Id.*

On appeal, the Ninth Circuit Court of Appeals affirmed the district court’s holding. The court initially found that EPA’s interpretation of the statutory requirements of Section 303(d) [33 U.S.C. § 1313(d)] as being applicable to waters that receive water from point sources, non-point sources, or both, is entitled to *Chevron* deference. The court reasoned that “Congress entrusted to the EPA the responsibility of approving or disapproving § 303(d)(1) lists, bestowing upon it the discretion that comes with such responsibility; the EPA has specialized experience regarding the CWA which this court lacks; and the agency has consistently interpreted the provisions at issue.” 291 F.3d at 1134. The court, after analyzing the language and structure of Section 303(d) and the structure of the statutory scheme as a whole, found EPA’s interpretation of Section 303(d) to be “entirely reasonable.” *Id.* at 1139.

Returning to Plaintiffs' argument here, the court simply can not find any basis to conclude that EPA's interpretation of a TMDL as the sum of WLAs and LAs is unreasonable. EPA has defined a TMDL as the sum of WLAs and LAs (plus background) since 1985. *See* 50 Fed. Reg. 1774. Since then, more than 47,000 TMDLs have been completed throughout the United States. (AR0000018; Doc. 110 at 14 of 52 n.2.) Of those, more than 25,000 were issued or approved by EPA and contained WLAs and LAs. Now, 28 years later, Plaintiffs challenge this interpretation of TMDLs arguing, for the first time, that "EPA's interpretation that the 'total' load somehow derives from the 'allocations' is unreasonable" (Doc. 139 at 9 of 12.) Nevertheless, every case that this court has identified that touched on this issue has said that a TMDL appropriately pertains to both point and non-point source allocations. *See, e.g., Pronsolino I*, 91 F. Supp. 2d 1337; *Pronsolino II*, 291 F.3d 1123; *see also Anacostia Riverkeeper*, 798 F. Supp. 2d 210; *Meiburg*, 296 F.3d at 1025 ("As should be apparent, TMDLs are central to the Clean Water Act's water-quality scheme because . . . they tie 'together point-source and non-point source pollution issues in a manner that addresses the whole health of the water.'"). In so concluding, courts have (1) parsed the language of Section 303(d), (2) analyzed the legislative history of Section 303(d), and (3) analyzed the statutory scheme as a whole. The court finds this analysis persuasive and exhaustive. As stated, EPA's interpretation is entitled to *Chevron* deference, because the CWA does not precisely define a TMDL, the definition of which is complex and technical. In the end, the court finds EPA's allocation of a TMDL as between WLAs and LAs to be entirely reasonable, and consistent with Congress's goals of establishing an "all-compassing program of water pollution regulation" and to establish a

“comprehensive long-range policy for the elimination of water pollution.” *Arkansas v. Oklahoma*, 503 U.S. 91, 107 n.12 (quoting *Milwaukee v. Illinois*, 451 U.S. 304, 318 (1981)).

b. Sector and Individual Source Allocations

Plaintiffs’ unlawful implementation argument does not end there. As stated, Plaintiffs challenge EPA’s allocations not only because they divide the allocations into WLAs and LAs, but also because EPA further allocated among various sectors including WLAs and LAs for agriculture, stormwater, wastewater, forest, non-tidal atmospheric deposition, onsite septic, and urban. (Doc. 96 at 29 of 81.) Plaintiffs further point out that EPA also established annual and daily WLAs for 478 individual permitted facilities. (*Id.*) It is this level of detail that Plaintiffs argue results in unlawful “micro-manage implementation.” (*Id.* at 28 of 81.)¹⁸

There is no denying that the Chesapeake Bay Final TMDL is much more than a single number for nitrogen, phosphorus, and sediment total load allocations. Indeed, the TMDL itself is several thousand pages (*see* AR0000015-AR0003790), but many of those pages are dedicated to information regarding source identification, watershed and land use descriptions, modeling application, and implementation approaches. The total nitrogen, total phosphorus, and total suspended sediment allocations themselves can be found in Tables 9-1, 9-2, and 9-3 of the TMDL, respectively, and span 33 pages, each page containing approximately 30 allocations. (AR000029-AR0000348.) Thus, it would be misleading to suggest

¹⁸ Here again, this argument is asserted notwithstanding Plaintiffs’ various contradictory statements that it is not the level of detail in the TMDL that amounts to implementation, but the fact that the allocations are “locked-in.” *See supra* note 15.

that the TMDL is not highly detailed and complex. However, the court does not find that this level of detail unlawfully crosses the line into TMDL implementation.

EPA's regulations instruct that WLAs and LAs should be assigned to "one of [the water body's] existing or future point sources of pollution." 40 C.F.R. §§ 130.2 (g) & (h). In *Anacostia Riverkeeper*, the court noted that "[a] core requirement of any TMDL is to divide sources of contamination along the water body by *specifying load allocations*, or LAs, to predict inflows of pollution from *particular non-point sources*; and then to set[] *wasteload allocations*, or WLAs, to allocate daily caps among *each point source* of pollution." 798 F. Supp. 2d at 248-49 (emphasis added). Thus, neither the regulations, nor the court in *Anacostia Riverkeeper*, anticipated that a TMDL would consist of only a single number. The regulations provide that a TMDL include allocations to point and, if necessary, non-point sources of pollution, rather than be devised at a later stage of post-TMDL implementation. *See id.* at 216 ("In addition to setting a maximum daily level of pollution, EPA regulations require TMDLs to allocate contaminant loads among point and non-point sources of pollution."). The court in *Anacostia Riverkeeper* went on to explain that:

Total pollutant load established by a TMDL are incorporated into the NPDES permit system, which is a key step in the enforcement of those load limits. Absent specification of WLAs for individual point sources in the TMDL, therefore, the task of breaking down the total pollutant load – represented by a single number – into individual allocations is effectively delegated to NPDES permit writers. To the extent multiple permit writers oversee a single water body, such delegation risks either failure to implement the TMDL through overly-generous individual allocations that, in the aggregate, exceed total load limits, or over-enforcement of the TMDL through the setting of unnecessarily harsh individual allocations developed out of fear of under-enforcement. *To minimize*

these risks, EPA reasonably determined that specific WLAs should be developed at the stage when both the State and Agency are evaluating the health of an entire water body – i.e., when developing the TMDL – because the designers of the TMDL can more easily take into account all point sources and attempt to divvy up acceptable pollution levels among them.

Id. at 249-50 (emphasis added). In other words, the court concluded that EPA reasonably assigned allocations to individual point sources. To do otherwise, *i.e.*, to simply give a number to an entire municipal sewer system, consisting of multiple sources of point source pollution, and then letting multiple permit writers attempt to attain that allocation, does not make sense because, as the court pointed out, the individual permit writers would lack the coordination required to effectively “divvy up acceptable pollution levels among [the sources].”

The court finds the *Anacostia Riverkeeper* court’s reasoning persuasive, and, if that reasoning holds true regarding a municipal sewer system draining into a single water body (as in *Anacostia Riverkeeper*), it is all the more true here, where six states and the District of Columbia all drain into the Chesapeake Bay. To merely set a number, and then let the states, permit writers, and other groups within each state “duke it out” would not only be impractical, but would also be inconsistent with the CWA’s foundational principle, which is that the burdens of eliminating pollution in the Nation’s water is one to be shared among federal, state, and local authorities. *Id.* at 250 (citing *Friends of the Earth v. EPA*, 346 F. Supp. 2d 182, 203 (D.D.C. 2004)).

In addition, it would be misleading to say that EPA was the sole author of the TMDL. Rather, the allocations were devised largely by the states in their WIPs. The process included considerable back-and-forth between EPA and the Bay

states. To reiterate, on November 3, 2009, EPA, following meetings with the Bay states, devised proposed target loads for nitrogen and phosphorus (AR0023289-AR0023293), followed by revised target loads as to nitrogen, phosphorus, and sediment. (AR0000244; AR0012670-AR0012682.) States used these targets to begin drafting their WIPs. EPA communicated with the Bay states during this phase, and set deadlines and expectations to guide the drafting process. (*See, e.g.*, AR0000255-AR0000256; AR0023294-AR0023301; AR0023289-AR0023293.) EPA and the Bay states worked together to improve the successive draft WIPs. The Final TMDL was, in all but three instances wherein EPA substituted backstop allocations, based on the Bay states' Phase I WIPs. Thus, as EPA argues in its reply brief "in all but three cases (the so-called "backstops"), EPA's TMDL allocations *were informed by* the state's WIPs, not the other way around." (Doc. 110 at 25 of 52) (emphasis in original).

Plaintiffs argue, however, that the WIP drafting process was not so cooperative, and that EPA exerted pressure over the states that amounted to coercion. In support, Plaintiffs offer two slides from EPA presentations, each containing a single-panel comic. Plaintiffs suggest that these comics portray EPA's coercive attitude toward the WIP drafting process. One comic contains the headnote "It's a new day for restoring local streams, rivers and the Chesapeake Bay." (AR0032986.) The illustration depicts a classroom with students, a teacher, and a caged tiger in the rear of the classroom. The caption reads "Well, Timmy, it looks like you've just earned yourself 10 minutes in the cage with Mr. Whiskers." The second comic depicts two men, one holding a ball and chain attached to his ankle. (AR0027660.) The caption states "You dropped the ball, You must have known

there would be consequences.” Plaintiffs also point to two emails that, in their view, further illustrate how EPA exerted pressure over the states. In one email, an EPA employee wrote to two employees of the Virginia Department of Conservation and Natural Resources, inquiring whether Virginia had “a better understanding of what needs to be in the WIPs and how EPA will judge adequacy of WIPs.” (Doc. 85-2.)¹⁹ In the other email, an EPA employee stated, “It’s important to stress that in the absence of significant revisions to the discussion topics we’ve had at our meeting EPA will be forced to retain these backstop allocations in the final TMDL.” (Doc. 85-6.) Finally, Plaintiffs list, without explaining, other threats, including: “(a) promulgating federal numeric nutrient standards, (b) requiring unreasonable additional point source reductions, (c) engaging in increased federal enforcement activity, (d) withholding grant money to states for reasons not intended by Congress, all because it did not agree with a state’s WIP.” (Doc. 96 at 33 of 81 (citing AR0024032-33).)

There is no doubt that EPA conveyed its expectations during the WIP drafting process and further conveyed the possibility of using backstop measures where the states did not meet EPA’s expectations. EPA expected each Bay state’s Phase I WIP to: (1) meet the state’s numeric target loads; and (2) provide “reasonable assurance” that the state’s proposed source and sector allocations would be met. (*See* Doc. 100 at 32 of 76.) Further, there is no dispute that, if EPA determined that the states’ efforts fell short, it would substitute its own backstop

¹⁹ These emails were not part of the original administrative record, but were added to the record when the court granted in part and denied in part Plaintiffs’ motion to complete the administrative record. (Doc. 92.) The emails were attached to Plaintiffs’ memorandum in support of its motion to complete the administrative record as exhibits. (*See* Docs. 85-2 and 85-6.)

measures. As Plaintiffs point out, the states did not always agree with EPA's backstop allocations. (*See* Doc. 109 at 30 of 56.) The question, then, is whether this arrangement amounted to unlawful coercion, or was the result of collaborative, cooperative federalism. The court finds in favor of the latter.

As several commentators have recognized, cooperative federalism can be, at times, messy and cumbersome. *See* Robert L. Fischman & Jaelith Hall-Rivera, *A Lesson for Conservation from Pollution Control Law: Cooperative Federalism for Recovery Under the Endangered Species Act*, 27 Colum. J. Envtl. L. 45, 79 (2002) (“[D]espite its sometimes messy and redundant framework, cooperative federalism has proven to be one of the most enduring characteristics of pollution control law over the past three decades.”); Philip J. Weiser, *Federal Common Law, Cooperative Federalism, and the Enforcement of the Telecom Act*, 76 N.Y.U.L. Rev. 1692, 1693 (2001) (“Cooperative federalism regulatory programs, which combine federal and state authority in creative ways, strike many courts and commentators as a messy and chaotic means of generating federal law.”) It is unavoidable that states and the federal government will occasionally disagree. Here, the federal government had oversight of the states' WIP drafting efforts. EPA worked with the states to ensure that the proposed allocations were sufficient to achieve water quality standards. The states had the first opportunity to determine the allocations necessary to achieve water quality standards. EPA then reviewed the proposed allocations, approving some while disapproving others. EPA inserted backstop allocations where necessary, and remanded the draft WIPs to the states for further analysis and revision. The states then submitted a final Phase I WIP. In short, EPA incorporated the states' allocations in all but three instances.

The parties have wildly different interpretations of this process. While Plaintiffs view the process as “threatening” and “coercive” (*see* Doc. 96 at 17-19 of 81), EPA describes the process as a “collaborative process that synergistically developed the TMDL allocations” and as being “both efficient and a model of ‘good government’ in action” (Doc. 110 at 23 of 52 n.9). Although there may be a fine line between collaboration and coercion, the court finds this framework to be more indicative of collaboration. The purpose of the revision process and the insertion of backstops was to strengthen the WIPs to ensure attainment of water quality standards through the use of both federal and state resources and expertise. The court is not convinced that the portions of the record identified by Plaintiffs rise to the level of coercion. Indeed, the record is replete with numerous communications that demonstrate discussion, debate, and negotiation between the federal and state government, not coercion.

Complete unanimity between the states and EPA in resolving all the complex issues involved here is likely impossible. Disagreements between the states and the federal government regarding some of the allocations necessary to achieve water quality standards was to be expected, and the debate and discussions that ensued were of nature that is required in a cooperative federalism scheme. Moreover, although Plaintiffs believe that this process was coercive, it is noteworthy that no state has filed suit challenging the TMDL, let alone alleged that their participation in the TMDL drafting process was a result of coercion. In short, the court concludes that the inclusion of sector and individual source allocations is consistent with the CWA and relevant caselaw. Moreover, the court finds that most of the individual allocations were provided by the states, not EPA, through the use

of CWA's cooperative federalism scheme. Thus, the record, when viewed as a whole, does not support a finding that the framework of federal and state interaction was coercive in nature so as to render the TMDL an unlawful federal implementation plan.

3. Backstop Adjustments

Plaintiffs contend that EPA unlawfully overrode state decisions on TMDL implementation by substituting backstop adjustments to the Bay states' WIPs. (Doc. 96 at 50 of 81.) As stated, EPA adopted the allocations in the state WIPs in all but three instances, which were as follows: (1) making New York's WLA for wastewater sources more stringent (AR0000285-AR0000285); (2) shifting 50 percent of the urban stormwater load that is not currently subject to NPDES permits from the LA category to the WLA category (AR0000287); and (3) shifting 75 percent of the pollutant loads that West Virginia allocated to animal feeding operations that are not subject to NPDES permitting from the LA category to the WLA category and signaling that EPA is prepared to designate any animal feeding operations as requiring a NPDES permit (AR0000292). Plaintiffs argue that these measures are binding on the states, and that the CWA does not authorize EPA to take such actions. (Doc. 109 at 25 of 56.)

The primary flaw in Plaintiffs' argument is that the CWA contains several provisions that support EPA's backstop authority. For instance, under the broad language of Section 117(g), EPA, in coordination with members of the Chesapeake Bay Executive Council, is charged with "ensur[ing] that management plans are developed and implementation is begun by signatories to the Chesapeake Bay Agreement *to achieve and maintain . . . the nutrient goals of the Chesapeake*

Bay Agreement . . . [and] the water quality requirements necessary to restore living resources to the Chesapeake Bay ecosystem.” 33 U.S.C. § 1267(g) (emphasis added). Moreover, Section 303 gives EPA oversight over the waters identified and the loads established in the TMDL. Specifically, Section 303(d) states:

Each State shall submit to the Administrator from time to time, . . . for his approval the waters identified and the loads established [for those waters requiring a TMDL]. The Administrator shall either approve or disapprove such identification and load If the Administrator disapproves such identification and load, he shall . . . identify such waters in such state and establish loads for such waters as he determines necessary to implement water quality standards applicable to such waters and upon such identification and establishment the State shall incorporate them into its current plan.

33 U.S.C. § 1313(d)(2).

The court finds that the backstop measures were properly used in instances where EPA disapproved of the state-submitted allocations, and, consistent with its responsibilities under Section 303(d), and its broad responsibilities of ensuring the nutrient goals of the Chesapeake Bay Agreement are achieved under Section 117(g), substituted its own allocations calculated to achieve applicable water quality standards. Plaintiffs do not dispute that these backstops were necessary to achieve water quality standards. Moreover, as explained below, the court finds that neither the backstop measures nor the WLAs or LAs are binding on the states. In short, EPA’s actions of reviewing the states’ proposed WIP allocations and substituting its own allocations where necessary did not violate the CWA.

4. Reasonable Assurances

In determining whether a state’s proposed allocations were adequate, EPA required “reasonable assurances” from the state that LAs will be achieved and

applicable water quality standards will be met.²⁰ (Doc. 96 at 51 of 81; AR0000250.) Plaintiffs argue, here again, that “the ‘reasonable assurance’ requirement is simply an attempt by EPA to unlawfully insert itself into TMDL implementation.” (*Id.*) Plaintiffs contend that this requirement lacks any basis in the CWA and is therefore *ultra vires*. In support, Plaintiffs note that Congress blocked EPA’s previous attempt to implement revised TMDL regulations that incorporate a “reasonable assurance” requirement. (Doc. 109 at 33 of 56) (citing 68 Fed. Reg. 13608, 13609 (Mar. 19, 2003).)

The court does not find that the reasonable assurances requirement was an unlawful exercise of authority by EPA under the CWA. First, unlike Plaintiffs’ other arguments, the court is hard-pressed to see precisely how this argument relates to implementation. For example, if EPA determines that a state has not met its burden of providing reasonable assurances, EPA may substitute a backstop allocation. (*See* Doc. 100 at 33 of 76.) This substitution gives way to the plausible, but rejected argument that EPA’s backstop allocations cross the line into implementation. However, the mere practice of setting a standard upon which the proposed allocations are judged is not, by itself, implementation. The standard does not require the states to undertake any particular implementation effort. Rather, the court finds that the “reasonable assurance” standard was an attempt by EPA to clarify the basis upon which the proposed allocations are judged. Moreover, as stated above, Section 303(d) requires that a TMDL be “established at a level necessary to implement the applicable water quality standards” 33 U.S.C. §

²⁰ EPA’s reasonable assurance requirement was first published in a 1991 guidance document, and was later reiterated in a 1997 guidance document. (Doc. 100 at 52 of 76; AR0022979-AR0022980).

1313(d)(1). EPA's reasonable assurances requirement appears to be consistent with this provision.

It bears repeating that a TMDL is an informational document, not an implementation plan. However, TMDLs provide crucial information for federal, state, and local actors in furtherance of the cooperative efforts to improve water quality as envisioned by the CWA. *See Anacostia Riverkeeper*, 798 F. Supp. 2d at 216-17. Here, where the target water body is drained by a multi-state watershed, cooperation and coordination are all the more crucial to achieving the statutory goal of achieving water quality standards. To the extent that TMDLs guide the states' implementation process,²¹ it is essential that the allocations contained therein be reasonably calculated to achieve those goals. This point was recognized by the court in *Anacostia*, when it stated that WLAs and LAs can be "developed at the stage when both the State and the [EPA] are evaluating the health of an entire water body – i.e., when developing the TMDL, because the designers of the TMDL can more easily take into account all point sources and attempt to divvy up acceptable pollution levels among them." 798 F. Supp. 2d at 250. To this end, the reasonable assurances requirement helps to inform the TMDL writer of the proper setting of pollutant allocations so that the TMDL equation is properly budgeted. This is true because WLAs are determined, in part, on the expectations of pollution reductions from LAs. If LAs are not fully achieved, water quality standards will not be met.

²¹ The TMDL/WIP dichotomy makes clear that development of the TMDL and WIPs are guided by each other. For example, "[d]raft Phase I WIPs were developed and submitted to EPA . . . [who] used them to support the development of specific allocations in the draft Bay TMDL." (AR0000256.) In turn, the Phase II WIPs will "subdivide the allocations provided in the Bay TMDL at an increasingly finer scale." (*Id.*) Lastly, "EPA will consider whether modifications to the Chesapeake Bay TMDL are necessary and appropriate on the basis of developments or changes in the jurisdictions' [Phase II and III] WIPs." (*Id.*)

The WLAs contained in an ineffectual TMDL will themselves be ineffectual and will therefore be useless as a NPDES permitting guide. On the other hand, where EPA determines reasonable assurances exists, greater loadings can be allocated to point sources. (AR000251.) Thus, the requirement of reasonable assurances allows a TMDL writer to decide *how* to apportion loadings between point and non-point sources under the TMDL cap.

In short, the court finds that nothing here runs afoul of the CWA. Rather, the reasonable assurances requirement is a practical measure that has a basis in Section 303(d) and 117(g) (requiring EPA to ensure that management plans and implementation are meeting the Bay's nutrient goals).²² This requirement does not violate the TMDL/WIP dichotomy, nor does it unlawfully impinge on the states' rights to make decisions regarding the implementation of TMDL allocations.

5. Allocations Are Not Binding

Plaintiffs additionally argue that the TMDL is much more than just an informational tool, but rather it creates unlawfully binding, "locked-in" allocations. Specifically, Plaintiffs state that "EPA violated the CWA not by referencing detailed allocations in the TMDL, but by locking those allocations in, establishing a federal timeline for implementation, and reserving exclusive authority to revise them."

²² The court is cognizant that broad policy declarations can not be used to justify every action. *See Rodriguez v. United States*, 480 U.S. 522, 525-26 (1987) ("[N]o legislation pursues its purposes at all costs. Deciding what competing values will or will not be sacrificed to the achievement of a particular objective is the very essence of legislative choice – and it frustrates rather than effectuates legislative intent simplistically to assume that whatever furthers the statute's primary objective must be the law."). Nevertheless, in the face of no countervailing provisions explicitly or implicitly requiring or prohibiting a certain action, any action that is consistent with policy declarations and otherwise lawful should be upheld.

(Doc. 109 at 23 of 56.) Having examined each of Plaintiffs' points, the court disagrees that the allocations are "locked-in."

The primary basis for Plaintiffs' argument rests in 40 C.F.R. § 122.44(d)(1)(vii)(B), which provides, that effluent limits in permits for point sources be "consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7." Said another way, NPDES permits must contain effluent limits that are consistent with applicable WLAs in a TMDL. Plaintiffs further point to the language of the TMDL itself which states that TMDL allocations may only be revised with the approval of EPA as further evidence that the allocations are binding on the Bay Jurisdictions. (Doc. 109 at 21 of 56 (citing AR0000332-AR0000333 ("EPA would consider a request by the jurisdictions to propose such a revision to the TMDL following appropriate notice and comment. Alternatively, a jurisdiction could propose to revise a portion(s) of the Bay TMDL that applies within its boundaries (including, but limited to specific WLAs and LAs) and submit those revisions to EPA for approval. If EPA approved any such jurisdiction-submitted revisions, those revisions would replace their respective parts in the EPA-established Bay TMDL framework."))).)

In essence, the parties dispute the amount of flexibility the Bay states retain to adjust allocations as point source permits are issued and non-point source pollution control measures are implemented. Plaintiffs claim these allocations are "in ink" and can only be changed by EPA. (Doc. 109 at 24 of 56.) Upon closer review, the court disagrees that the allocations are so permanent.

First, it is evident from the language of the Bay TMDL that a state is not powerless to effectuate a revision or modification in TMDL allocations. Indeed, a state is free to propose modifications and submit them to EPA for review. EPA established this framework, recognizing that:

[N]either the world at large nor the Bay watershed is static. In a dynamic environment like the Bay watershed, during the next 15 years change is inevitable. It may be possible to accommodate some of those changes within the existing TMDL framework without the need to revise it in whole, or in part.

(AR0000332.) Thus, the TMDL framework anticipates future modifications which can originate from either EPA or the states. That EPA gets final approval makes sense, given that EPA had final approval over the original allocations during the drafting process outlined and approved above. An alternative scenario, where states retain the flexibility to change the allocations as they see fit, would render the TMDL allocations essentially meaningless, and would be inconsistent with CWA Section 117(g) which requires EPA to ensure that management plans are developed and implementation is begun in order to achieve and maintain the Bay's nutrient goals. 33 U.S.C. § 1267(g).

Second, as recognized by the TMDL, and by the EPA Environmental Appeals Board, "WLAs are not permit limits *per se*; rather they still require translation into permit limits [W]hile [40 C.F.R. § 122.44(d)(1)(vii)(B)] require[s] *consistency*, [it does] not require that permit limitations that will finally be adopted by a final NPDES permit be *identical* to any of the WLAs that may be provided in a TMDL." (AR0000332; *In re City of Moscow*, 10 E.A.D. 135, 2001 WL 988721 (July 27, 2001) (emphasis in original).) Accordingly, in some circumstances, a state may write a NPDES permit limit that is different from the

WLA, provided that it is consistent with the operative assumptions underlying the WLA. (AR0000332.)

Other provisions in the TMDL provide for additional flexibility to the states. For example, inevitably, new or increased loadings of nutrients or sediments will occur that are not specifically accounted for in the TMDL. The TMDL contemplates such an occurrence, and permits these loadings, provided that the increases are offset by reductions and credits generated by other sources pursuant to offset programs developed and implemented by the states and subject to periodic review by EPA. (AR0000329-AR0000331.) Additionally, the TMDL supports the use of water quality trading programs that permit point and non-point sources to trade pounds of phosphorus or nitrogen, provided such trading does not result in exceedances of water quality standards and is otherwise consistent with the CWA and applicable regulations. (AR0000331.) Thus, the individual sources are free to trade pollution amounts without the need to revise or adjust the TMDL allocations. With all these considerations in mind, it is apparent the TMDL allocations are not set in stone to the extent suggested by Plaintiffs. The court, therefore, rejects Plaintiffs' assertion that "a state has no flexibility to reallocate pollutant loadings or from nonpoint to point sources" and that there are no circumstances in which "permit writers can include *less* stringent permit limits." (Doc. 109 at 20 of 56 (emphasis in original).)

Plaintiffs also argue that the TMDL is illegally binding with respect to non-point sources, because "EPA can coerce state action through threats to withhold grant funding." (*Id.*) No party disputes that the states retain primary responsibility for non-point pollution source control, and that EPA may influence state action

through the grant program. *See supra* note 12; 33 U.S.C. § 1329. In *Pronsolino II*, the Ninth Circuit, in upholding the Garcia River TMDL, stated that the TMDL did not invade California’s implementation plan because “California chose both *if* and *how* it would implement the Garcia River TMDL.” 291 F.3d at 1140. The court explained that “[s]tates must implement TMDLs only to the extent that they seek to avoid losing federal grant money; there is no pertinent statutory provision otherwise requiring implementation of § 303 plans or providing for their enforcement.” *Id.* In other words, nothing requires states to “uncritically and mechanically” implement each and every TMDL allocation. Rather, states are free to choose whether or not they decide to do so, subject only to the risk of losing federal grant money. While the district court in *Pronsolino I* noted that such a withholding may seem like “coercive threats,” especially to states that previously received and relied upon federal grant money, the framework nevertheless “is not direct federal regulation” but rather state regulation, albeit “influenced by incentives established by Congress and the agency charged with protecting the environment.” 91 F. Supp. 2d at 1355.

While recognizing the fine line between incentivizing and coercion, the court is content that the grant program does not coerce state action. Plaintiffs do not allege any specific instance of federal coercion, opting instead to challenge the framework as whole. However, the court concludes, as did the courts in *Pronsolino I* and *II*, that the prospect of losing federal grant money does not make TMDLs “binding” or invade in the states’ planning process.

Finally, the court must also address Plaintiffs’ argument that the establishment of a federal timeline violates the CWA. (Doc. 109 at 23 of 56.) As stated above, the TMDL requires that all pollution control measures be fully

implemented by 2025, with at least 60 percent of the actions taken by 2017. (AR0000016, AR0000021.) Plaintiffs argue that “when EPA locked-in those allocations and deadlines, it exceeded its CWA authority by invading state implementation planning.” (Doc. 109 at 26 of 56.) However, Plaintiffs’ characterization of these deadlines as “EPA’s deadlines” is misleading. A closer look at the record reveals that EPA and the Bay Jurisdictions reached a consensus regarding the target dates. At a meeting of the PSC on October 1, 2007, the seven Bay Jurisdictions and EPA reached consensus that, by 2025, all necessary pollution control measures would be in place. (AR0000056.) Accordingly, the record supports a conclusion that the timeline at issue was established by the Bay Partnership, which undermines the position that the timeline was a unilateral federal dictate from EPA.

In short, the court concludes that, because the 2025 implementation target was established jointly by the Bay Partnership, and because the states retain sufficient flexibility to change the allocations, the TMDL does not violate the CWA by impermissibly “locking-in” the TMDL allocations.

6. Upstream States

Plaintiffs argue that EPA’s authority was limited to establishing the Final TMDL “to implement the *tidal Bay* [water quality] standards,” which include those standards adopted by Maryland, Virginia, Delaware, and the District of Columbia. (Doc. 96 at 58 of 81 (emphasis added).) However, Plaintiffs maintain that EPA does not have authority to set allocations for the headwater jurisdictions of Pennsylvania, New York, and West Virginia. Plaintiffs reason that EPA’s authority is derivative of the states’ authority under 33 U.S.C. § 1313(d)(2). Because states

have no authority to allocate pollutant loadings for water bodies and sources outside their boundaries when establishing TMDLs under Section 1313(d)(2), EPA similarly lacks authority to do so. Plaintiffs believe that, if EPA's interpretation of the CWA is adopted, an untenable precedent would be established whereby any downstream state (*e.g.*, Louisiana) could establish a TMDL with allocations to sources in upstream states (*e.g.*, the other 31 upstream states in the Mississippi River Basin). The court rejects this argument.

Section 303(d) of the CWA does not expressly address what happens when a multi-state water body is impaired. *See* 33 U.S.C. § 1313(d). Indeed, there is no on-point precedent that establishes what happens when waters that are impaired overlap state boundaries. Likewise, there is no precedent that establishes precisely how to reduce water pollution loadings to an interstate water body impaired by pollutants from seven different states. These scenarios implicate obvious federalism concerns, some of which have already been addressed by the court. The history of the Bay TMDL, as outlined above, represents the Partnership's efforts to resolve these issues without upsetting the balance of federal-state control established by the CWA. The question remains, however, whether EPA has the authority to issue allocations not only to the tidal states, but to the upstream states as well. The court finds that it does.

Although nothing in the CWA specifically authorizes EPA to take this holistic, or watershed approach, it is equally true that nothing in the CWA prohibits such an approach. In the legislative history to the CWA, Congress recognized and anticipated a watershed-wide approach by stating "the Chesapeake Bay is an ecosystem that ignores State boundaries" and that implementation "will require a

partnership between the Federal Government and the individual states.” (Doc. 100 at 19 of 56) (citing Leg. History of Water Quality Act of 1987 at 1473-74 (1988).)

This watershed-wide approach also appears to be consistent, if not specifically authorized by CWA Section 303(d), which requires TMDLs to be established for impaired waters “at a level necessary to implement the applicable water quality standards.” 33 U.S.C. § 1313(d)(1)(C). The accomplishment of this task, however, raises practical questions pertaining to the equitable distribution of the burden of reducing pollutant loads. If the court were to adopt Plaintiffs’ stance, then the tidal states of Maryland, Virginia, and Delaware would be responsible for reducing their pollution loadings to achieve water quality standards, notwithstanding significant contributions from upstream states. Pennsylvania, for example, is responsible for the largest portion of nitrogen loads to the Bay, accounting for 44 percent of the total, and is the second highest contributor of sediment, accounting for 32 percent of the total. (AR0000108-AR00000109.) Thus, to pin the hopes of attaining the statutorily-mandated goal of achieving water quality standards on the three tidal states would not only be inequitable, but also impractical and likely impossible.

Application of the TMDL to upstream states also finds support within EPA’s regulations. For example, under EPA’s regulations, WLAs and LAs must reflect the “portion of a receiving water’s loading capacity that is allocated to one of *its* existing or future [point or non-point] sources. . . .” 40 C.F.R. §§ 130.2 (g) & (h) (emphasis added). In support of watershed-wide allocations, EPA interpreted the reference to “its” point and non-point sources to mean *all* watershed sources – from tidal as well as upstream sources – contributing to nutrient loading and

sedimentation of the Bay. (*See* Doc. 100 at 55 of 76.) EPA's interpretation of its own regulation is entitled to deference, unless "plainly erroneous or inconsistent with the regulation." *Auer v. Robbins*, 519 U.S. 452, 461 (1997) (citing *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 359 (1989)). The court finds EPA's interpretation not only meets this deferential standard, but is otherwise entirely reasonable, considering that upstream sources unquestionably contribute pollutants to the Bay.

As with most issues involved here, there is scant judicial precedent to guide the court's analysis. However, in *Arkansas v. Oklahoma*, the United States Supreme Court addressed a similar issue in the context of a NPDES permit challenge. 503 U.S. 91 (1992). In that case, the city of Fayetteville, Arkansas, applied for a NPDES permit to discharge sewage into a tributary to the Illinois River at a point upstream from the Oklahoma border. *Id.* at 95. EPA issued the permit, conditioned upon the outcome of a study then underway. *Id.* If that study indicated that more stringent limitations were necessary to ensure compliance with Oklahoma's water quality standards, the permit would need to be modified to incorporate those limits. *Id.* Oklahoma challenged the permit, arguing that the upstream discharge violated Oklahoma's water quality regulations, which, as they pertained to the Illinois River, were stringent in light of Oklahoma's designation of that river as a "scenic river." *Id.* at 95-96. Arkansas, meanwhile, argued that the CWA does not require an Arkansas point source to comply with Oklahoma standards. *Id.* at 97.

The Court began its analysis by recognizing that interstate waters issues, particularly scenarios wherein a downstream state objects to the introduction of

pollutants to a waterway by an upstream state, have been a “font of controversy” since the founding of our Nation. *Id.* at 98. The Court further recognized, as this court does here, that the CWA “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 our Nation’s waters.’” *Id.* at 101 (quoting 33 U.S.C. § 1251(a)). The Court then framed the issues as follows: “First, does the Act require the EPA, in crafting and issuing a permit to a point source in one State, to apply the water quality standards of downstream States? Second, even if the Act does not *require* as much, does the Agency have the statutory authority to mandate such compliance?” *Id.* at 104.

The Court found that EPA’s position – that in issuing the NPDES permit for a source in Arkansas, EPA was required by the CWA and its regulations to also comply with Oklahoma’s downstream water quality standards – was a reasonable exercise of EPA’s statutory discretion. The Court reasoned that, although the CWA does not require that upstream discharges comply with downstream water quality standards, the CWA also does not limit EPA’s authority to mandate such compliance. The Court further reasoned that “[t]he application of state water quality standards in the interstate context is wholly consistent with the Act’s broad purposes” of restoring our Nation’s waters. *Id.* at 106-107 (citing 33 U.S.C. § 1251(a).) Thus, this case supports the proposition that EPA has authority to regulate upstream pollution sources in order to achieve downstream water quality standards. This conclusion is also consistent with the Supreme Court’s recognition that “the Clean Water Act vests the EPA and the States broad authority to develop long-range, areawide programs to alleviate and eliminate existing pollution.” *Id.* at 108. This

holding is persuasive to the court's conclusion here that EPA has the authority to set TMDL allocations for upstream states in order to achieve downstream water quality standards.

In short, the court endorses the holistic, watershed approach used here. This approach receives ample support in the CWA, its legislative history, and Supreme Court precedent. Although Plaintiffs propose alternative methods of regulating upstream sources,²³ the existence of these alternatives does not render EPA's present approach unreasonable or unlawful. Rather, the court finds the approach to be consistent with the CWA, and practical in terms of attaining a full and fair contribution by *all* major source sectors and coordinated participation of *all* states in the watershed.

7. Conclusion as to implementation arguments

In the end, the court is tasked with determining precisely what is "implementation" in this context. As stated above, implementation is not an easily discernable term. Webster's Dictionary does not provide much guidance, defining "implementation" as "the act of implementing or the state of being implemented." The Oxford Online Dictionary is also of little help, defining implementation as "the process of putting a decision or plan into effect; execution." By far the most helpful definition comes from the Eleventh Circuit's statement in *Meiburg*, referring to an "implementation plan" as "a formal statement of how the level of pollutant can be brought down or kept under the TMDL." 296 F.3d at 1030. Clearly, this TMDL is not an implementation plan because it contains only allocations, and no formal

²³ For example, Plaintiffs suggest that rather than establishing a watershed-wide TMDL, EPA could regulate upstream sources by objecting to inadequate NPDES permits, or establishing separate upstream water quality standards and TMDLs.

statement of *how* the allocations are to be achieved. Indeed, the TMDL is silent as to methodology, strategy, and other implementations measures. Rather, implementation, in this regard, is left correctly to the states.²⁴ Furthermore, the states retain sufficient flexibility within this framework regarding the TMDL allocations to support the conclusion that the allocations are not binding. In the end, the states are still free to choose both *if* and *how* they will implement the TMDL allocations, regardless of the level of detail in those allocations, rendering Plaintiffs' federalism concerns unfounded.

The parties argue the import of the numerous consent decrees, settlement agreements, and memoranda of understanding outlined above. *See supra* Section I.E. The parties also argue the import of the states' consent to EPA's establishment of a Bay TMDL on behalf of the states. EPA contends that the states' consent coupled with the consent decrees, MOUs, settlement agreements, as well as President Obama's executive order, provide supplemental sources of authority for EPA's issuance of the Final TMDL. (*See* Doc. 100 at 19 of 76.) Plaintiffs, meanwhile, contend that neither state consent nor a consent decree or MOU justify an *ultra vires* action or supplant the provisions of the CWA. (Doc. 109 at 29 of 56) (citing *Meiburg*, 296 F.3d at 1034.) The court agrees that none of these

²⁴ The individual Jurisdictions themselves seemingly recognize this flexibility in their Phase I WIPs. Virginia's Phase I WIP, for example, states:

Virginia . . . reserves the right to adjust this [implementation] plan based on new information [W]e will continue to work with EPA, stakeholders, and the public to ensure that our implementation improves water quality in a manner that is sensible, fair and cost effective as this process unfolds over the next 15 years.

(AR0026675.) Similar reservations appear in other states' Phase I WIPs. (*See, e.g.*, AR0025149, AR0026456, AR0026460.)

supplemental sources can unilaterally expand Congressionally-bestowed powers. However, because the court concluded that EPA's actions in this matter were authorized under the CWA without considering these supplemental sources of authority, the court need not opine further on this issue. The court will note, however, that EPA's actions of establishing a watershed-wide TMDL appear to be consistent with the consent decrees, MOUs, and settlement agreements identified above, as well as the President's executive order.

Having determined that EPA did not act *ultra vires* by unlawfully invading the states' rights to implementation, and that the Final TMDL was otherwise consistent with the CWA, the court will now turn to Plaintiffs' other arguments raised under the APA.

C. Alleged Procedural Violations Under the APA

Plaintiffs' arguments alleging procedural violations are two-fold. First, Plaintiffs argue that the 45-day public comment period was insufficient because it did not give the public adequate opportunity to meaningfully participate in the rulemaking process. (*See* Doc. 96 at 59 of 81.) Second, Plaintiffs contend that key information and documentation regarding the models used was unavailable during the comment period. The court rejects both arguments.

1. The 45-day Public Comment Period Was Adequate

The APA requires EPA to provide notice of its proposed rulemaking adequate to afford "interested parties a reasonable opportunity to participate in the rule making through submission of written data, views, or arguments" 5 U.S.C. § 553(c). "The required publication or service of a substantive rule shall be made not less than 30 days before its effective date" 33 U.S.C. § 553(d). The

purpose of the public comment period is to allow interested individuals the opportunity to communicate information, concerns, and criticisms to EPA during the rule-making process. *See Conn. Light & Power Co. v. NRC*, 673 F.2d 525, 530 (D.C. Cir. 1982). During that period, EPA “must provide sufficient factual detail and rational for the rule to permit interested parties to comment meaningfully.” *Fla. Power & Light Co. v. United States*, 846 F.2d 765, 771 (D.C. Cir. 1988).

The court does not find the 45-day public comment period to be unreasonable. For one, it exceeds the statutory minimum requirement of a 30-day period. 33 U.S.C. § 553(d). Thus, EPA did more than was statutorily required by the APA. Moreover, although the technical complexities of the regulations and issues raised here might have warranted a longer public comment period, to suggest that public participation in this process was limited to 45 days belies the record. As outlined above, efforts to improve the water quality of the Chesapeake Bay date back more than three decades, and the TMDL drafting process has been ongoing for more than a decade. *See supra* Sections I.C. & D. Over that decade, numerous meetings were held wherein EPA encouraged public participation and accepted public input. From 2005-2010 alone, 730 CBP committee, team, and stakeholder meetings were held. (*See* AR0000422-AR0000454.) As EPA points out, some of the Plaintiffs participated in the committee meetings and were involved in the drafting process. (Doc. 100-3 at 37-38; AR0000432.) Nothing in the record suggests that Plaintiffs could not avail themselves of these opportunities for participation.

Plaintiffs also fail to state specifically how they were harmed by the 45-day comment period, other than to claim generally that the comment period was insufficient to “allow the public to understand – let alone evaluate – how EPA

arrived at the allocation scheme in the Draft and Final TMDL.” (Doc. 96 at 59 of 81.) Despite this assertion, the record shows that Plaintiffs submitted 141 comments, many of which addressed the issues challenged here. (Doc. 100 at 60 of 75; AR0029851.) To EPA’s credit, a team of EPA specialists reviewed and responded to the more than 14,000 comments, including the 141 comments submitted by Plaintiffs. (AR0000341.) The comments were considered in the establishment of the Final TMDL. (*Id.*; AR0000016.) EPA also held 18 public meetings and 15 webinars during the comment period. (AR0000020; AR0000339-AR0000340.) Based on this, as well as the fact that the Final TMDL is the product of an open process spanning more than a decade, the court is unable to find the 45-day public comment period unreasonable. Simply put, Plaintiffs either participated, or had the opportunity to participate, in the drafting process in a meaningful way. Thus, the court concludes that EPA’s actions were not arbitrary and capricious. It is also worth noting that a longer comment period would likely violate the terms of the settlement agreement in *Fowler v. EPA*, No. 1:09-C-00005-CKK (D.D.C. 2009), which required that the Final TMDL be established by December 31, 2010. This conclusion also finds support in relevant caselaw. *See, e.g., N. Am. Van Lines, Inc. v Interstate Commerce Comm’n*, 666 F.2d 1087, 1092 (7th Cir. 1981) (finding a 45-day comment period to be adequate for new regulations issued by the Interstate Commerce Commission, noting that “[o]nce an agency has fulfilled its statutory requirement governing a § 553 rulemaking, its decision may not be subjected to any additional procedural restraints”); *Conn. Light & Power Co.*, 673 F.2d at 534 (approving a 30-day comment period, notwithstanding “the technical complexity of the regulations”); *Omnipoint Corp. v. Fed. Commc’ns Comm’n*, 78 F.3d 620, 629

(D.C. Cir. 1996) (approving a 7-day comment period, in part due to a Congressional mandate to implement the regulations “without administrative or judicial delays”).²⁵

2. EPA Provided Adequate Documentation Regarding Modeling

Plaintiffs’ second procedural objection is that they were deprived of key modeling information during the public comment period. Specifically, Plaintiffs contend that EPA withheld documentation regarding three core models underlying the Final TMDL: Scenario Builder, the Watershed Model, and the water quality and sediment transport model (“WQSTM”).

As stated above, during a public comment period, an agency must provide sufficient factual background to give interested parties an opportunity to meaningfully comment on the proposed rule. *See Fla. Power & Light Co.*, 846 F.2d at 771. “When the basis for a proposed rule is a scientific decision, the scientific material which is believed to support the rule should be exposed to the view of interested parties for their comment.” *United States v. Nova Scotia Food Prods. Corp.*, 568 F.2d 240, 252 (2d Cir. 1977); *see also Prometheus Radio Project v. Fed. Comm’n Comm’n*, 373 F.3d 372, 412 (3d Cir. 2004). However, a regulation is not automatically invalidated even when notice-and-comment errors are committed by the agency; the party asserting error has the burden of demonstrating prejudice to its ability to effectively comment on the proposed rule. *See* 5 U.S.C. § 706 (“In [reviewing an agency action], the court shall review the whole record or those parts

²⁵ EPA further argues that Plaintiffs’ argument regarding the alleged procedural deficiency of the 45-day public comment period is deficient because 5 U.S.C. § 553(c) applies to agency “rulemaking” and the TMDL is an “informal adjudication” as opposed to a “rule.” (*See* Doc. 100 at 60 of 76.) Because the court is able to reject Plaintiffs’ argument based on a reading of the APA and applicable caselaw, the court need not decide the “adjudication” versus “rule” distinction in this context.

of it cited by a party, and due account shall be taken of the rule of prejudicial error.”); *see also Pers. Watercraft Indus. Ass’n v. Dept. of Commerce*, 48 F.3d 540, 544 (D.C. Cir. 1995); *AARP v. Equal Emp’t Opportunity Comm’n*, 390 F. Supp. 2d 437, 461 (E.D. Pa. 2005). In order to prevail, Plaintiffs must “indicate with reasonable specificity what portions of the documents it objects to and how it might have responded if given the opportunity.” *See AARP*, 390 F. Supp. 2d at 461 (citing *Pers. Watercraft Indus. Ass’n*, 48 F.3d at 544). This rule is not without reason. As is evident from this case, administrative procedures are often lengthy and complex and to vacate an administrative action due to *any* procedural error would be extreme. Accordingly, “[a]s incorporated into the APA, the harmless error rule requires the party asserting error to demonstrate prejudice from the error.” *First Am. Disc. Corp. v. CFTC*, 222 F.3d 1008, 1015 (D.C. Cir. 2000). With these precepts in mind, the court will analyze Plaintiffs’ arguments as to each of the implicated models.

a. Scenario Builder

Scenario Builder, as described in the Final TMDL, “is a standalone data pre-processor for the Phase 5.3 Chesapeake Bay Watershed Model.” (AR0000179.) The model is designed to estimate sediment and nutrient loads from land use activities and to “facilitate parameterization of those sources for watershed model scenarios to be run through the Bay Watershed Model.” (*Id.*) In essence, information from Scenario Builder is inputted to the Watershed Model, which then simulates fate, transport, and delivery of those pollutants to the Bay.

Plaintiffs argue that key components of the model were withheld from the public during the comment period. Specifically, Plaintiffs argue that only a single document describing how the model was developed was provided. (Doc. 96 at

62 of 81) (citing AR0000954-AR0000955; AR0001321; AR0001527-AR0001529).) Plaintiffs believe that EPA's failure to disclose key documents, or delayed release of documentation, limited their ability to fully analyze the technical science under the TMDL and comment in a meaningful way.

A review of the record reveals that Plaintiffs had access to more than just a single document regarding Scenario Builder. For example, the draft TMDL, which was made available on or about September 24, 2010 (the beginning of the public comment period), contained a "live" link, providing "[a]dditional information related to Scenario Builder and its application in Bay TMDL development" (AR0023947.) EPA represents that the link directed users to a September 2010 publication titled *Estimates of County-Level Nitrogen and Phosphorus Data for Use in Modeling Pollutant Reduction, Documentation for Scenario Builder Version 2.2*, which is attached to Plaintiffs' brief in opposition to EPA's cross-motion. (Doc. 110 at 34 of 52; AR0023947-AR0023948; *see also* Doc. 109-15.)²⁶ This 129-page document describes how Scenario Builder was used, and covered, in detail, the mathematical functions, sources of data, key tables of data, and summaries of other data used in Scenario Builder. Furthermore, in response to requests for more information, EPA provided additional documents regarding Scenario Builder about one week before the close of the public comment period. That documentation included the Scenario Builder code, which was provided on October 29, 2010, and additional information regarding supporting databases was provided on November 1-5, 2010. (Doc. 100 at 64 of 76; AR0000929.)

²⁶ Although the court is unable to access the link, Plaintiffs have not refuted EPA's representation, and the publication will be considered for all intents and purposes.

With regard to the delayed disclosure of the additional requested documents, courts have held that:

[I]t is not *per se* improper for EPA to add evidence to the record at the end of or close to the end of the comment period. EPA may sometimes be able to show that the late entry did not foreclose an opportunity for ‘meaningful public comment.’ For example, it might be proper for EPA to develop new evidence in order to respond to a particular comment, so long as it gives the commenter an opportunity to reply to the new evidence.

Small Refiner Lead Phase-Down Task Force v. EPA, 705 F.2d 506, 541 (D.C. Cir. 1983.) Furthermore, “[a]gencies may develop additional information in response to public comments and rely on that information without starting anew, unless prejudice is shown.” *Pers. Watercraft Indus. Ass’n*, 48 F.3d at 544 (internal quotations and citations omitted).

Here, although the disclosures were made late in the comment period, Plaintiffs have failed to show, with “reasonable specificity,” or any specificity for that matter, how they were prejudiced. For example, Plaintiffs fail to suggest what they might have told EPA if delayed information was disclosed earlier. *See id.* Nor do Plaintiffs suggest that the information they did receive was defective. *See id.* Even now, having received and reviewed all the disclosed information, Plaintiffs remain unable to make a reasonably specific showing of prejudice. Instead, Plaintiffs argue more generally, stating that EPA’s actions are *per se* improper given “the critical importance of the [three models].” (Doc. 109 at 44 of 56.) As stated above, courts have rejected this generalized argument.

Plaintiffs instead hitch their wagon to their belief that, in the Third Circuit, “a regulated party *automatically* suffers prejudice when members of the public . . . are denied access to the *complete* public record.” (Doc. 109 at 45 of 56)

(quoting *Hanover Potato Prods. v. Shalala*, 989 F.2d 123, 130 n.9 (3d Cir. 1993) (emphasis added)).) However, Plaintiffs' reliance on *Hanover Potato* is misplaced. Initially, the court notes that the quoted language is from a footnote and is clearly dicta. Plaintiffs have not identified any court that has followed *Hanover Potato* for this proposition; nor has the court's independent research revealed any other case holding that an incomplete public record *automatically* results in prejudice. Moreover, the *Hanover Potato* case is distinguishable from the case at bar. First, the underlying facts are distinguishable. The facts underlying that case involved a request for the administrative record on which the Food and Drug Administration based its regulatory decision to ban sulfites as applied to "fresh" potatoes. In the underlying case, the district court granted summary judgment in favor of Hanover, finding that the Food and Drug Administration ("FDA") acted arbitrarily and capriciously by not making the entire record available for public inspection. Specifically, the FDA admitted that the 83-volume record previously certified "was not the true and complete administrative record." 989 F.2d at 126. The court then certified a new administrative record wherein 63 percent of the new record had never been disclosed to the public. The district court understandably found prejudice in light of the incomplete public record. 989 F.2d at 126 n.5. Thus, *Hanover Potato* did not involve a TMDL, or any other CWA or environmental regulation. Second, the case is procedurally distinguishable. On appeal, the Third Circuit affirmed the district court's decision. Following the appeal, Hanover moved the district court for attorney's fees. The district court denied that motion on the ground that Hanover was not prejudiced by FDA's omissions because Hanover did not review the administrative record during the comment period. In the case relied upon by

Plaintiffs here, the appellants were appealing the district court's denial of attorney's fees under the Equal Justice to Act law, 28 U.S.C. § 2412. 989 F.2d 123. Thus, the Third Circuit was not resolving an administrative review under the APA, but rather was deciding the merits of an attorney fees petition. In short, the court will follow the well-settled and well-reasoned rule that a regulation is not automatically invalidated even where notice-and-comment errors are committed by the agency unless the party asserting error satisfies its burden of demonstrating prejudice to its ability to meaningfully comment on the proposed rule. *See* 5 U.S.C. § 706; *see also AARP*, 390 F. Supp. 2d at 461; *Pers. Watercraft Indus. Ass'n*, 48 F.3d at 544.

The court in *Hanover Potato* also stated that one of the purposes of the public comment period "was to give the public the opportunity to participate in the rule-making process." 989 F.2d 130 n.9 (citing *Conn. Light & Power Co.* 673 F.2d at 530.) This court agrees, and it appears as though this purpose has been fulfilled. As Plaintiffs point out, Scenario Builder has been in development since 2003. (Doc. 96 at 61 of 81.) By this court's count, 730 CBP committee, team, and stakeholder public meetings took place between 2005 and 2010, some of which were attended by Plaintiffs. (*See* AR0000422-AR0000454; *see also* Doc. 108-5.) The Scenario Builder model was discussed at several of these meetings (*see, e.g.,* AR0000433-AR0000434; Docs. 100-11, 100-12, & 100-13) and this process was capped with a 45-day public comment period. Thus, the court finds that the public was given ample opportunity to participate in the Scenario Builder development process.

Finally, Plaintiffs infer that they have been improperly blamed for not being able to identify how they would have commented differently had they received adequate information. (*See* Doc. 109 at 45 of 56) ("EPA resorts to blaming us for

not demonstrating how we would have commented differently”) This, however, is precisely the burden that courts have placed on the objecting party. *See Pers. Watercraft Indus. Ass’n*, 48 F.3d at 544 (“The party objecting has the burden of indicating with reasonable specificity . . . how it might have responded if given the opportunity.” (internal quotations and citations omitted)); *Small Refiner Lead Phase-Down Task Force*, 705 F.2d at 540-41 (“It is also incumbent upon a petitioner objecting to the agency’s late submission of documents to indicate with ‘reasonable specificity’ . . . how it might have responded if given the opportunity.” (internal quotations and citations omitted)).

In short, the court finds that Plaintiffs have failed to meet their burden of establishing how they were prejudiced by the alleged failure to disclose key documents regarding Scenario Builder, and further finds that members of the public, including Plaintiffs, were provided with a meaningful opportunity to participate in the TMDL drafting and comment process. Thus, the court concludes that EPA’s actions related to the disclosure of Scenario Builder documentation were not arbitrary and capricious.

b. Watershed Model

The Phase 5.3 Community Watershed Model simulates loading and transport of nitrogen, phosphorus, and sediment from pollutant sources throughout the Bay watershed and provides loading estimates resulting from various management scenarios. (AR0000171.) Plaintiffs argue that the documentation provided for the model was outdated as it pertained to an earlier Phase 5 version that was created in 2008, two years prior to the re-calibrated Phase 5.3 version. (Doc. 96 at 63 of 81.) Plaintiffs contend that this documentation was of little value, because

the public did not have access to information describing how the current model was developed, calibrated, and applied. (*Id.*) Plaintiffs further contend that EPA failed to disclose estimated nutrient transport factors and edge-of-stream nutrient targets for conservation cropland, information which is important in calibrating watershed models. (Doc. 96 at 51, 52 of 81.)

EPA concedes that it did not provide the public with Phase 5.3 documentation during the public comment period, but reasons that it could not have done so because the final application of the Watershed Model was not completed until after public comments were reviewed and final decisions regarding the Model were made by the Bay Partnership. (Doc. 100 at 62 of 76.) Consequently, EPA argues that production of complete documentation was impossible during the public comment period. (*Id.*) EPA further concedes that the documentation provided during the public comment period did not include estimated nutrient transport factors or edge-of-stream nutrient targets. However, EPA argues that Plaintiffs have made no efforts to show specifically how this lack of information resulted in prejudice.

Turning to the administrative record, there is no dispute that the Phase 5.3 Watershed Model itself and the supporting information necessary to run the model (*i.e.*, the model code) were available to the public during the public comment period. (*See* Doc. 96 at 63 of 81; Doc. 110 at 31 of 52.) Moreover, there is no dispute that EPA provided documentation regarding the Phase 5 Watershed Model. (Doc. 96 at 63 of 81.) Nevertheless, Plaintiffs contend that because EPA did not provide any information regarding how the current model was developed, calibrated, and applied, the availability of the model itself was of little value. (*Id.*)

The court's review of the record reveals that there was ample information available during the public comment period that explained the Phase 5.3 Watershed Model. For example, the draft TMDL explained the purpose and importance of the Watershed Model, and its overall purpose in the modeling framework. (*See* AR0023922-AR0023962.) More specifically, the draft TMDL described the Chesapeake Bay watershed water quality network and explained that "[d]ata from [this network] have been used to develop, calibrate and verify the Phase 5.3 Chesapeake Bay Watershed Model" (AR0023929.) The draft TMDL also described the Phase 5.3 Watershed Model as an "open source model" or a "community model" in which "input data [including precipitation information, point source discharges, atmospheric deposition, and land use] are all available to the public," allowing end users to actually use the model. (AR0023948.) The draft TMDL further provided a detailed description regarding the development and calibration of the Phase 5.3 Watershed Model. (AR0023948-AR0023957.) In addition to that information, the draft TMDL provided links to the model itself, as well as to information that included further details regarding model inputs and explaining how certain loading was calculated. (*See, e.g.*, AR0023948, AR0023951.) It is not apparent from Plaintiffs' briefs or from oral argument precisely how this information was deficient, and this court is ill-equipped to conduct its own technical review of the Watershed Model. In short, the court concludes that information provided during the public comment, including the model itself, the code, and supporting documentation was sufficient, and does not support a finding that EPA's actions were arbitrary and capricious.

Even if the court did find inadequacies, it is not readily apparent precisely how Plaintiffs were prejudiced by such inadequacies. As stated above, Plaintiffs have the burden of showing with reasonable specificity how it might have responded if given the opportunity. Plaintiffs point out that they now have access to the edge of stream nutrient target information as a result of an “errata” which is part of the administrative record. (*See* Doc. 96 at 66 of 81 (citing AR0014689).) Even so, Plaintiffs still fail to identify how they would have responded differently. Rather, Plaintiffs once again argue that the failure to have access to the complete record automatically resulted in prejudice (Doc. 96 at 66-67 of 81 (citing *Hanover Potato*, 989 F.2d 130 n.9)), an argument that the court already considered and rejected.

c. WQSTM

Plaintiffs assert similar arguments regarding the WQSTM. Plaintiffs argue that full and complete documentation regarding the WQSTM was made available only after the close of the public comment period, and that the draft TMDL acknowledges that the WQSTM was “in preparation” during that time. (Doc. 96 at 67 of 81.) Plaintiffs further argue that the documentation otherwise provided was outdated, as it refers to an earlier version of the WQSTM. (*Id.*)

EPA argues, once again, that formal documentation for the WQSTM could not be completed until after the public comment period when all decisions by the Partnership were finalized, giving due consideration to the comments. (Doc. 100 at 66 of 76.) Nevertheless, EPA contends that Plaintiffs had access to all necessary information for public comment. EPA explains that “[t]he WQSTM is composed of a series of linked and nested models including: hydrodynamic model, estuarine water column model, sediment transport model, sediment/water interface and flux model,

underwater Bay grasses model, bottom sediment dwelling community model, filter feeder model, phytoplankton model, and zooplankton model.” (*Id.*) EPA further explains that only the sediment transport model was altered after 2002, and therefore any documentation provided was current for all component models except the sediment transport model. Plaintiffs retort that the WQSTM “fundamentally” and “dramatically” changed between 2005 and 2010. (Doc. 96 at 67 of 81; Doc. 109 at 41 of 56.) Unfortunately, the citations provided by the parties are of little help to the court.²⁷

The court must reject Plaintiffs’ arguments for two reasons. First, the court finds that the public was given ample opportunity to participate in the rule making process. As with the other models, the WQSTM was in development for years and was discussed during several public meetings. (*See, e.g.*, AR0000433-AR0000434; Doc. 100, Exs. K & L.) This process was capped with a 45-day public comment period in which numerous documents were provided to the public that explained how the sediment transport component of the WQSTM was applied in developing sediment load allocations. (*See, e.g.*, AR0023991; AR0024008-AR0024012; AR0024015-AR0024016; AR0024317-AR0024384; AR0024374-AR0024384.) As to the adequacy of the documentation, it is readily apparent that

²⁷ Plaintiffs, for example, ask us to “compare” a 373-page document titled *The Chesapeake Bay Eutrophication Model* (July 2004) (AR0015530-AR0015903) with a 227-page document titled *The 2010 Chesapeake Bay Eutrophication Model: A Report of the US Environmental Protection Agency Chesapeake Bay Program* (December 2010) (AR0016176-AR0016403). Without further explanation, it is nearly impossible for this court to identify precisely how these documents indicate a fundamental change in the model. EPA, for its part, cites to the same documentation to support the proposition that all models, except for the sediment transport model, remained the same. Here again, same problem. *See N.W. Nat’l Ins. Co. v. Baltes*, 15 F.3d 660, 662-63 (7th Cir. 1994) (“District judges are not archaeologists. They need not excavate masses of papers in search of revealing tidbits – not only because the rules of procedure place the burden on the litigants, but also because their time is scarce.”).

the draft TMDL references several documents that provide an explanation of the WQSTM. (See AR0024131.) Although one of these, a document titled *The Chesapeake Bay Water Quality and Sediment Transport Model* (2010), is labeled as “in preparation” (*Id.*), other documents, including, but not limited to, documentation for the 2002 WQSTM were provided. (*Id.*; AR0015530-AR0015903). The court is unclear precisely what information Plaintiffs required beyond what was provided. Second, Plaintiffs again failed to identify, with any specificity, how they might have responded to the final documentation. The final documentation, which was published along with the Final TMDL in December 2010 (see AR0016176-AR0016403), has now been available for review for nearly three years. Nevertheless, Plaintiffs still do not point to any specific information and proffer how they would have responded had it been available during the public comment period. Rather, they merely point out differences between the preliminary documentation and the final documentation, which fails to sustain Plaintiffs’ burden of demonstrating prejudicial error. Accordingly, the administrative record does not support a finding that EPA acted arbitrarily and capriciously in this regard.

D. Alleged Modeling Flaws

Plaintiffs’ final arguments relate to EPA’s alleged reliance on flawed models and flawed data inputs. Plaintiffs raise several arguments contending that the Final TMDL is arbitrary and capricious on the basis that EPA used models to support TMDL allocations beyond their predictive capabilities. (See Doc. 96 at 68 of 81.) The court will first set forth the standard for judicial review of an agency’s use of analytic modeling before addressing each argument in turn.

A model “is an abstraction from and simplification of the real world.” *Small Refiner Lead Phase-Down Task Force*, 705 F.2d at 535. “Administrative agencies have undoubted power to use predictive tools.” *Id.* Under the arbitrary and capricious standard set forth in the APA, a court’s “deference to the agency is greatest when reviewing technical matters within [the agency’s] expertise. In particular, the choice of scientific data and statistical methodology to be used is best left to the sound discretion of the [EPA].” *Nat’l Ass’n of Metal Finishers v. EPA*, 719 F.2d 624, 657 (3d Cir. 1983), *rev’d on other grounds sub nom. Chem. Mfrs. Ass’n v. NRDC*, 470 U.S. 116 (1985); *see also Kennecott v. EPA*, 780 F.2d 445, 449 (4th Cir. 1985) (“Once the agency has been found to follow the prescribed course of procedure, its choice of scientific data and statistical methodology is entitled to respect.”). As to data gathering, “EPA typically has wide latitude in determining the extent of data-gathering necessary to solve a problem” and a court “generally defer[s] to an agency’s decision to proceed on the basis of imperfect scientific information, rather than to ‘invest the resources to conduct a perfect study.’” *Sierra Club v. EPA*, 167 F.3d 658, 662 (D.C. Cir. 1999) (citing *Am. Iron & Steel Inst. v. EPA*, 115 F.3d 979, 1004 (D.C. Cir. 1997) (per curiam)). However, EPA’s discretion, while broad, is not infinite, and an agency’s choice of model will be rejected if it “bears no rational relationship to the reality it purports to represent.” *Id.* (quoting *Columbia Falls Aluminum Co. v. EPA*, 139 F.3d 914, 923 (D.C. Cir. 1998)). As before, the burden is on Plaintiffs to prove that EPA’s actions were arbitrary and capricious. *Forest Guardians*, 611 F.3d at 704.

1. Flawed Models

Plaintiffs first challenge the models used by EPA as being insufficient for allocations established at the sub-watershed level. Plaintiffs argument targets specifically the Watershed Model, contending that, although the Watershed Model was appropriate for TMDL development on a regional scale, the model was “not appropriate for development and implementation of TMDLs at the local watershed scale.” (Doc. 96 at 70 of 71 (citing AR0015016-AR0015017).) Plaintiffs further argue that EPA acknowledged, but largely ignored, a peer review by the Chesapeake Bay Program’s Scientific and Technical Advisory Committee (“STAC”) that concluded that the Watershed Model was insufficient to support management decisions at the local watershed scale. *Id.*

EPA defends the use of the Watershed Model, noting that local allocations were not established solely through EPA’s use of the Watershed Model, but by the Bay states in their WIPs. (Doc. 100 at 69 of 76.) EPA points out that, through a collaborative effort, EPA and the Bay states first developed nitrogen, phosphorus, and sediment allocations at the river basin level – a scale approved by STAC’s peer review – and then continued to work with the states to develop proposed allocations at smaller levels using a combination of, *inter alia*, modeling results, programmatic implementation capabilities, monitoring data, and land use information. (*Id.* at 69-70.) Nevertheless, Plaintiffs maintain that the Bay states used the Watershed Model when developing their WIP allocations at the local watershed level notwithstanding STAC’s assessment that the Watershed Model was not capable of supporting TMDL implementation at that level. (Doc. 109 at 48 of 56.)

The record does not support a finding that EPA's actions were arbitrary and capricious. First, the record is clear that the individual WLAs and LAs were, in all but three instances, provided by the Bay states via their respective WIPs, and were not derived solely from the Watershed Model. *See supra* Section III.B.2.b. Second, it is not *per se* improper for the Bay states to use the Watershed Model to assist in developing local watershed allocations. In fact, as explained above, the model was developed as a "community" model, allowing end users, such as watershed researchers, TMDL model developers, and implementation plan developers, to use the model in whatever way they deemed proper. (AR0000181.) The record shows that the Bay states used a variety of sources in developing local allocations, as recommended by the Partnership in its January 28, 2009 document titled *Response of the Modeling Subcommittee to the Second STAC Review of the Phase 5 Community Watershed Model*. (AR0014964-AR0014974.) In that document, the Modeling Subcommittee acknowledged that inputs for the Watershed Model are at the county level, and stated that "in some cases, the best approach for a local TMDL exercise would be to use appropriate elements of the Phase 5 [Watershed] Model with augmentation of local-scale land use and monitoring data when this is available or can be set up." (AR0014967-AR0014968.) The Subcommittee continued, stating

[T]he use of [the] Phase 5 [Watershed Model] for local TMDLs has the merit of the best available information consistently applied at the local scale. The alternative local approach is incorporation of additional local data at a more localized scale into a separate model, but that has the tradeoff of inconsistent analyses among different local jurisdictions. Given the tradeoffs of the relative merits of the two approaches, *we believe the local allocations should be evaluated on a case-by-case basis, and this is what our State partners are doing.*

(AR0014968) (emphasis added.) A review of the record confirms that, in setting local allocations, the Bay states used a variety of data including land use information, annual data on agricultural conservation practices implemented by farmers, stormwater best management practices, and current treatment technologies at wastewater discharge facilities. (*See* Doc. 110 at 45, 46 of 110 (citing AR0024982-AR0025421; AR0025422-AR0025524; AR0025525-AR0026300; AR0026301-AR0026392; AR0026393-AR0026671; AR00266720-AR0026812; AR0026813-AR0026962; AR0000250-AR0000261; AR0005397-AR0005405; and AR0012888-AR0012937).)

In light of the record, the court finds no support of Plaintiffs' argument that EPA stretched the Watershed Model's capabilities too far. While it appears that the Watershed Model is not calibrated to set local allocations, it is also apparent that the Model was used in conjunction with a number of other local factors that states also considered in drafting their local allocations, which were decided on a case-by-case basis. Thus, Plaintiffs have failed to meet their burden of showing that there was no rational relationship between the use of the Watershed Model and the development of local allocations.

2. Flawed Data

Plaintiffs next argue that EPA's reliance on flawed data renders the Final TMDL arbitrary and capricious. Plaintiffs point to several data inputs that they contend were erroneously used to determine loading estimates. For example, Plaintiffs argue that EPA improperly estimated that 50 percent of the cultivated cropland in the Bay watershed employed conventional tillage while the other 50 percent used conservation tillage. (Doc. 96 at 73 of 81; AR0014637.) In support,

Plaintiffs point to a U.S. Department of Agriculture Natural Resource Conservation Service (“NRCS”) draft report dated October 2010, which estimated that 88 percent of the 4.38 million acres of cultivated cropland in the Bay watershed employed conservation tillage, while only seven percent used conventional tillage, with the remaining five percent using a mix of both practices. (AR0032862; Doc. 98-4.) According to Plaintiffs, correction of this single factor would have significantly changed the modeled pollutant loadings from these areas. (*See* Doc. 96 at 74 of 81 (displaying chart showing a more than eight million pound per year difference in nitrogen loading when the different figures are used).)

Nevertheless, the court must give substantial deference to EPA so long as EPA provides a rational basis for its use of data. EPA states that it used data provided by the United States Department of Agriculture (“USDA”)-funded Conservation Technical Information Center at Purdue University (“USDA data”) because it was more detailed and comprehensive than the data used by the NRCS. (Doc. 100 at 71 of 76.) EPA explained that

[t]he conservation tillage data, as well as the agricultural portion of the CBP Watershed Model, is based in part on USDA county-level agricultural census data from thousands of farms from 1982-2007. . . . On the other hand, the NRCS data on conservation tillage[] was based on surveys of a sample of approximately 200 farms located across the Bay watershed, covered only four years, and provided information only at the scale of four large watersheds – Susquehanna River, Potomac River, upper Chesapeake Bay, and lower Chesapeake Bay – for the entire Chesapeake Bay basin.

(Doc. 100 at 71, 72 of 76 (citing AR0029737; AR0000184-R0000187).)

Accordingly, it is clear that EPA considered the NRCS data, but ultimately rejected it in favor of USDA data. (*Id.*; *see also* Doc. 89-1.) There is also evidence on the

record that EPA worked with USDA to discuss the differences in EPA's and USDA's modeling efforts. (AR0029735-AR0029738; AR0029752-AR0029759.)

The court must defer to EPA's use of data, even if that data is imperfect, unless the data bears no rational relationship to the reality it purports to represent. *See Sierra Club*, 167 F.3d 662. Based on the record highlighted above, it is clear that EPA had a rational basis for the data used. Accordingly, the court can not conclude that Plaintiffs have satisfied their burden of showing that EPA's data choice was arbitrary and capricious and the court must defer to the Agency's expertise. *See Nat'l Ass'n of Metal Finishers*, 719 F.2d at 657; *In re Three Mile Island Alert, Inc.*, 771 F.2d 720, 737 (3d Cir. 1985) (giving deference to Nuclear Regulatory Commission's decision to rely on earlier studies of the health effects of the TMI-2 accident, stating "we believe this is the kind of scientific determination over which 'a reviewing Court must generally be at its most deferential.'" (quoting *Balt. Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 U.S. 87, 97 (1983))); *Pa. Dep't of Env'tl. Res. v. EPA*, 932 F.2d 269, 272 (3d Cir. 1991) ("On the merits of EPA's refusal to consider the updated . . . data, we defer to its expertise." (citing *EPA v. Nat'l Crushed Stone Ass'n*, 449 U.S. 64, 83 (1980))).

Plaintiffs' argument that EPA used improper assumptions regarding agricultural runoff suffers the same fate. Plaintiffs contend that EPA improperly assumed that 15 to 21 percent of all manure at animal feeding operations is left on impervious surfaces and managed in such a way that it runs off into Bay tributaries. (Doc. 96 at 76 of 81.) Here again, EPA did consider and address concerns regarding EPA's manure management data (*see* AR0001535-AR001550), and explained that "EPA's data reflect reductions in nutrients due to natural processes such as runoff

flows from feeding operations to streams, and that only a portion of nitrogen and phosphorous contained in the 15-21% of manure losses actually enters adjacent streams.” (Doc. 100 at 73 of 76 (citing AR0016176-AR0016403).) Thus, for the same reasons cited above, the court will defer to EPA’s use of this data and concludes that Plaintiffs have failed to demonstrate that EPA’s actions in this regard were arbitrary and capricious.

IV. Conclusion

Notwithstanding the expansive administrative record, and the complexity of the numerous issues implicated herein, the court’s scope of review in this case is relatively narrow. In accordance with the deferential standards applicable to a court’s review of an agency’s actions, this court must give EPA’s interpretation of the CWA and its use of scientific models and data due deference in light of EPA’s scientific and technical expertise. Plaintiffs are charged with the heavy burden of showing that the issuance of the Bay TMDL was arbitrary and capricious, and that EPA’s use of modeling and data bore no rational relationship to the realities they purport to represent. Having carefully considered Plaintiffs’ arguments, and the applicable portions of the administrative record related thereto, the court concludes that Plaintiffs have failed to meet this burden. The court further concludes that the procedures established to ensure public participation in the TMDL drafting process were sufficient to withstand scrutiny under the APA.

In closing, the court offers the following. The ecological and economic importance of the Chesapeake Bay is well-documented. As the largest estuary in the United States, the Chesapeake Bay is essential for the well-being of many living

things. (*See* AR0024989.) The record demonstrates extensive efforts on behalf of the Bay Partnership to protect this important resource. And yet, nutrient pollution and sedimentation remain a critical concern. Relevant to the legal challenges *sub judice*, the record reveals that the Partnership undertook significant efforts to preserve the framework of cooperative federalism, as envisioned by the CWA, and that EPA did not unlawfully infringe on the Bay states' rights because the CWA is an "all-compassing" and "comprehensive" statute that envisions a strong federal role for ensuring pollution reduction. *See Pronsolino I*, 91 F. Supp. 2d at 1341; 33 U.S.C. § 1267(g). Indeed, considering the numerous complexities of regulating an interstate water body, EPA's role is critical to coordinating the Bay Jurisdictions' efforts to ensure pollution reduction. In short, the court concludes that the framework established by the Bay Partnership in developing the Bay TMDL is consistent with the provisions of the CWA and APA. Accordingly, the court will grant Defendant EPA's and Defendant-Intervenor Municipal Associations Group's cross-motions for summary judgment and will deny Plaintiffs' motion for summary judgment. An appropriate order will issue.

S/Sylvia H. Rambo
United States District Judge

Dated: September 13, 2013.

-103-

AO 450 (Rev. 5/85) Judgment in a Civil Case

United States District Court

MIDDLE DISTRICT OF PENNSYLVANIA

JUDGMENT IN A CIVIL CASE

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

Case No: 1:11-CV-0067

Judge Sylvia H. Rambo

Plaintiffs

V.

United States Environmental Protection Agency

Defendant

Chesapeake Bay Foundation, Inc.;
Citizens for Pennsylvanias 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,

Intervenor Defendants

☐

Jury Verdict. This action came before the Court for a trial by jury. The issues have been tried and the jury has rendered its verdict.

☒

Decision by Court. This action came to trial or hearing before the court. The issues have been tried or heard and a decision has been rendered.

Case 1:11-cv-00067-SHR Document 151 Filed 09/17/13 Page 2 of 2

IT IS ORDERED AND ADJUDGED that summary judgment be and is hereby entered in favor of the Defendant and Intervenor Defendants, United States Environmental Protection Agency; Chesapeake Bay Foundation, Inc.; Citizens for Pennsylvanias 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, and against the Plaintiffs, 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, on all claims

Date: September 17, 2013

Mary E. D'Andrea, Clerk of Court

/s/ Mark J. Armbruster
Deputy Clerk

ADDENDUM

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SUBCHAPTER I—RESEARCH AND RELATED PROGRAMS

§ 1251. Congressional declaration of goals and policy

(a) Restoration and maintenance of chemical, physical and biological integrity of Nation's waters; national goals for achievement of objective

The objective of this chapter is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. In order to achieve this objective it is hereby declared that, consistent with the provisions of this chapter—

(1) it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985;

(2) it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983;

(3) it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited;

(4) it is the national policy that Federal financial assistance be provided to construct publicly owned waste treatment works;

(5) it is the national policy that areawide waste treatment management planning processes be developed and implemented to assure adequate control of sources of pollutants in each State;

(6) it is the national policy that a major research and demonstration effort be made to develop technology necessary to eliminate the discharge of pollutants into the navigable waters, waters of the contiguous zone, and the oceans; and

(7) it is the national policy that programs for the control of 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.

(b) Congressional recognition, preservation, and protection of primary responsibilities and rights of States

It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and

to consult with the Administrator in the exercise of his authority under this chapter. It is the policy of Congress that the States manage the construction grant program under this chapter and implement the permit programs under sections 1342 and 1344 of this title. It is further the policy of the Congress to support and aid research relating to the prevention, reduction, and elimination of pollution and to provide Federal technical services and financial aid to State and interstate agencies and municipalities in connection with the prevention, reduction, and elimination of pollution.

(c) Congressional policy toward Presidential activities with foreign countries

It is further the policy of Congress that the President, acting through the Secretary of State and such national and international organizations as he determines appropriate, shall take such action as may be necessary to insure that to the fullest extent possible all foreign countries shall take meaningful action for the prevention, reduction, and elimination of pollution in their waters and in international waters and for the achievement of goals regarding the elimination of discharge of pollutants and the improvement of water quality to at least the same extent as the United States does under its laws.

(d) Administrator of Environmental Protection Agency to administer chapter

Except as otherwise expressly provided in this chapter, the Administrator of the Environmental Protection Agency (hereinafter in this chapter called "Administrator") shall administer this chapter.

(e) Public participation in development, revision, and enforcement of any regulation, etc.

Public participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State under this chapter shall be provided for, encouraged, and assisted by the Administrator and the States. The Administrator, in cooperation with the States, shall develop and publish regulations specifying minimum guidelines for public participation in such processes.

(f) Procedures utilized for implementing chapter

It is the national policy that to the maximum extent possible the procedures utilized for implementing this chapter shall encourage the drastic minimization of paperwork and inter-agency decision procedures, and the best use of available manpower and funds, so as to prevent needless duplication and unnecessary delays at all levels of government.

(g) Authority of States over water

It is the policy of Congress that the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated or otherwise impaired by this chapter. It is the further policy of Congress that nothing in this chapter shall be construed to supersede or abrogate rights to quantities of water which have been established by any State. Federal agencies shall co-operate with State and local agencies to develop comprehensive solu-

tions to prevent, reduce and eliminate pollution in concert with programs for managing water resources.

(June 30, 1948, ch. 758, title I, § 101, as added Pub. L. 92-500, § 2, Oct. 18, 1972, 86 Stat. 816; amended Pub. L. 95-217, §§ 5(a), 26(b), Dec. 27, 1977, 91 Stat. 1567, 1575; Pub. L. 100-4, title III, § 316(b), Feb. 4, 1987, 101 Stat. 60.)

AMENDMENTS

1987—Subsec. (a)(7). Pub. L. 100-4 added par. (7).

1977—Subsec. (b). Pub. L. 95-217, § 26(b), inserted provisions expressing Congressional policy that the States manage the construction grant program under this chapter and implement the permit program under sections 1342 and 1344 of this title.

Subsec. (g). Pub. L. 95-217, § 5(a), added subsec. (g).

SHORT TITLE OF 2008 AMENDMENT

Pub. L. 110-365, § 1, Oct. 8, 2008, 122 Stat. 4021, provided that: “This Act [amending sections 1268 and 1271a of this title] may be cited as the ‘Great Lakes Legacy Reauthorization Act of 2008’.”

Pub. L. 110-288, § 1, July 29, 2008, 122 Stat. 2650, provided that: “This Act [amending sections 1322, 1342, and 1362 of this title] may be cited as the ‘Clean Boating Act of 2008’.”

SHORT TITLE OF 2002 AMENDMENT

Pub. L. 107-303, § 1(a), Nov. 27, 2002, 116 Stat. 2355, provided that: “This Act [enacting section 1271a of this title, amending sections 1254, 1266, 1268, 1270, 1285, 1290, 1324, 1329, 1330, and 1375 of this title, enacting provisions set out as notes under this section, section 1254 of this title, and section 1113 of Title 31, Money and Finance, and repealing provisions set out as a note under section 50 of Title 20, Education] may be cited as the ‘Great Lakes and Lake Champlain Act of 2002’.”

Pub. L. 107-303, title I, § 101, Nov. 27, 2002, 116 Stat. 2355, provided that: “This title [enacting section 1271a of this title and amending section 1268 of this title] may be cited as the ‘Great Lakes Legacy Act of 2002’.”

Pub. L. 107-303, title II, § 201, Nov. 27, 2002, 116 Stat. 2358, provided that: “This title [amending section 1270 of this title] may be cited as the ‘Daniel Patrick Moynihan Lake Champlain Basin Program Act of 2002’.”

SHORT TITLE OF 2000 AMENDMENTS

Pub. L. 106-457, title II, § 201, Nov. 7, 2000, 114 Stat. 1967, provided that: “This title [amending section 1267 of this title and enacting provisions set out as a note under section 1267 of this title] may be cited as the ‘Chesapeake Bay Restoration Act of 2000’.”

Pub. L. 106-457, title IV, § 401, Nov. 7, 2000, 114 Stat. 1973, provided that: “This title [amending section 1269 of this title] may be cited as the ‘Long Island Sound Restoration Act’.”

Pub. L. 106-457, title V, § 501, Nov. 7, 2000, 114 Stat. 1973, provided that: “This title [enacting section 1273 of this title] may be cited as the ‘Lake Pontchartrain Basin Restoration Act of 2000’.”

Pub. L. 106-457, title VI, § 601, Nov. 7, 2000, 114 Stat. 1975, provided that: “This title [enacting section 1300 of this title] may be cited as the ‘Alternative Water Sources Act of 2000’.”

Pub. L. 106-284, § 1, Oct. 10, 2000, 114 Stat. 870, provided that: “This Act [enacting sections 1346 and 1375a of this title and amending sections 1254, 1313, 1314, 1362, and 1377 of this title] may be cited as the ‘Beaches Environmental Assessment and Coastal Health Act of 2000’.”

SHORT TITLE OF 1994 AMENDMENT

Pub. L. 103-431, § 1, Oct. 31, 1994, 108 Stat. 4396, provided that: “This Act [amending section 1311 of this title] may be cited as the ‘Ocean Pollution Reduction Act’.”

SHORT TITLE OF 1990 AMENDMENT

Pub. L. 101-596, § 1, Nov. 16, 1990, 104 Stat. 3000, provided that: “This Act [enacting sections 1269 and 1270 of

this title, amending sections 1268, 1324, and 1416 of this title, and enacting provisions set out as notes under this section and section 1270 of this title] may be cited as the ‘Great Lakes Critical Programs Act of 1990’.”

Pub. L. 101-596, title II, § 201, Nov. 16, 1990, 104 Stat. 3004, provided that: “This part [probably means title, enacting section 1269 of this title and amending section 1416 of this title] may be cited as the ‘Long Island Sound Improvement Act of 1990’.”

Pub. L. 101-596, title III, § 301, Nov. 16, 1990, 104 Stat. 3006, provided that: “This title [enacting section 1270 of this title, amending section 1324 of this title, and enacting provisions set out as a note under section 1270 of this title] may be cited as the ‘Lake Champlain Special Designation Act of 1990’.”

SHORT TITLE OF 1988 AMENDMENT

Pub. L. 100-653, title X, § 1001, Nov. 14, 1988, 102 Stat. 3835, provided that: “This title [amending section 1330 of this title and enacting provisions set out as notes under section 1330 of this title] may be cited as the ‘Massachusetts Bay Protection Act of 1988’.”

SHORT TITLE OF 1987 AMENDMENT

Section 1(a) of Pub. L. 100-4 provided that: “This Act [enacting sections 1254a, 1267, 1268, 1281b, 1329, 1330, 1377, 1381 to 1387, and 1414a of this title, amending this section and sections 1254, 1256, 1262, 1281, 1282 to 1285, 1287, 1288, 1291, 1311 to 1313, 1314, 1317 to 1322, 1324, 1342, 1344, 1345, 1361, 1362, 1365, 1369, 1375, and 1376 of this title, and enacting provisions set out as notes under this section, sections 1284, 1311, 1317, 1319, 1330, 1342, 1345, 1362, 1375, and 1414a of this title, and section 1962d-20 of Title 42, The Public Health and Welfare] may be cited as the ‘Water Quality Act of 1987’.”

SHORT TITLE OF 1981 AMENDMENT

Pub. L. 97-117, § 1, Dec. 29, 1981, 95 Stat. 1623, provided that: “This Act [enacting sections 1298, 1299, and 1313a of this title, amending sections 1281 to 1285, 1287, 1291, 1292, 1296, 1311, and 1314 of this title, and enacting provisions set out as notes under sections 1311 and 1375 of this title] may be cited as the ‘Municipal Wastewater Treatment Construction Grant Amendments of 1981’.”

SHORT TITLE OF 1977 AMENDMENT

Section 1 of Pub. L. 95-217 provided: “That this Act [enacting sections 1281a, 1294 to 1296, and 1297 of this title, amending this section and sections 1252, 1254 to 1256, 1259, 1262, 1263, 1281, 1282 to 1288, 1291, 1292, 1311, 1314, 1315, 1317 to 1319, 1321 to 1324, 1328, 1341, 1342, 1344, 1345, 1362, 1364, 1375, and 1376 of this title, enacting provisions set out as notes under this section and sections 1284, 1286, 1314, 1321, 1342, 1344, and 1376 of this title, and amending provisions set out as a note under this section] may be cited as the ‘Clean Water Act of 1977’.”

SHORT TITLE

Section 1 of Pub. L. 92-500 provided that: “That this Act [enacting this chapter, amending section 24 of Title 12, Banks and Banking, sections 633 and 636 of Title 15, Commerce and Trade, and section 711 of former Title 31, Money and Finance, and enacting provisions set out as notes under this section and sections 1281 and 1361 of this title] may be cited as the ‘Federal Water Pollution Control Act Amendments of 1972’.”

Section 519, formerly section 518, of Act June 30, 1948, ch. 758, title V, as added Oct. 18, 1972, Pub. L. 92-500, § 2, 86 Stat. 896, and amended Dec. 27, 1977, Pub. L. 95-217, § 2, 91 Stat. 1566, and renumbered § 519, Feb. 4, 1987, Pub. L. 100-4, title V, § 506, 101 Stat. 76, provided that: “This Act [this chapter] may be cited as the ‘Federal Water Pollution Control Act’ (commonly referred to as the Clean Water Act).”

SAVINGS PROVISION

Section 4 of Pub. L. 92-500 provided that:

“(a) No suit, action, or other proceeding lawfully commenced by or against the Administrator or any

istrator first determines that disposal of the pollutants in such landfill would provide a higher standard of protection of the public health, safety, and welfare than disposal of such pollutants by any other method including, but not limited to, incineration or a chemical destruction process.

(b) The Administrator is authorized to make grants to the State of New York to carry out this section from funds allotted to such State under section 1285(a) of this title, except that the amount of any such grant shall be equal to 75 per centum of the cost of the project and such grant shall be made on condition that non-Federal sources provide the remainder of the cost of such project. The authority of this section shall be available until September 30, 1983. Funds allotted to the State of New York under section 1285(a) of this title shall be available under this subsection only to the extent that funds are not available, as determined by the Administrator, to the State of New York for the work authorized by this section under section 1265 or 1321 of this title or a comprehensive hazardous substance response and clean up fund. Any funds used under the authority of this subsection shall be deducted from any estimate of the needs of the State of New York prepared under section 1375(b) of this title. The Administrator may not obligate or expend more than \$20,000,000 to carry out this section.

(June 30, 1948, ch. 758, title I, § 116, as added Pub. L. 96-483, § 10, Oct. 21, 1980, 94 Stat. 2363; amended Pub. L. 105-362, title V, § 501(d)(2)(B), Nov. 10, 1998, 112 Stat. 3284; Pub. L. 107-303, title III, § 302(b)(1), Nov. 27, 2002, 116 Stat. 2361.)

AMENDMENTS

2002—Subsec. (b). Pub. L. 107-303 repealed Pub. L. 105-362, § 501(d)(2)(B). See 1998 Amendment note below.

1998—Subsec. (b). Pub. L. 105-362, § 501(d)(2)(B), which directed the substitution of “section 1375 of this title” for “section 1375(b) of this title” in penultimate sentence, was repealed by Pub. L. 107-303. See Effective Date of 2002 Amendment note below.

EFFECTIVE DATE OF 2002 AMENDMENT

Amendment by Pub. L. 107-303 effective Nov. 10, 1998, and Federal Water Pollution Act (33 U.S.C. 1251 et seq.) to be applied and administered on and after Nov. 27, 2002, as if amendments made by section 501(a)-(d) of Pub. L. 105-362 had not been enacted, see section 302(b) of Pub. L. 107-303, set out as a note under section 1254 of this title.

§ 1267. Chesapeake Bay

(a) Definitions

In this section, the following definitions apply:

(1) Administrative cost

The term “administrative cost” means the cost of salaries and fringe benefits incurred in administering a grant under this section.

(2) Chesapeake Bay Agreement

The term “Chesapeake Bay Agreement” means the formal, voluntary agreements executed to achieve the goal of restoring and protecting the Chesapeake Bay ecosystem and the living resources of the Chesapeake Bay ecosystem and signed by the Chesapeake Executive Council.

(3) Chesapeake Bay ecosystem

The term “Chesapeake Bay ecosystem” means the ecosystem of the Chesapeake Bay and its watershed.

(4) Chesapeake Bay Program

The term “Chesapeake Bay Program” means the program directed by the Chesapeake Executive Council in accordance with the Chesapeake Bay Agreement.

(5) Chesapeake Executive Council

The term “Chesapeake Executive Council” means the signatories to the Chesapeake Bay Agreement.

(6) Signatory jurisdiction

The term “signatory jurisdiction” means a jurisdiction of a signatory to the Chesapeake Bay Agreement.

(b) Continuation of Chesapeake Bay Program

(1) In general

In cooperation with the Chesapeake Executive Council (and as a member of the Council), the Administrator shall continue the Chesapeake Bay Program.

(2) Program Office

(A) In general

The Administrator shall maintain in the Environmental Protection Agency a Chesapeake Bay Program Office.

(B) Function

The Chesapeake Bay Program Office shall provide support to the Chesapeake Executive Council by—

(i) implementing and coordinating science, research, modeling, support services, monitoring, data collection, and other activities that support the Chesapeake Bay Program;

(ii) developing and making available, through publications, technical assistance, and other appropriate means, information pertaining to the environmental quality and living resources of the Chesapeake Bay ecosystem;

(iii) in cooperation with appropriate Federal, State, and local authorities, assisting the signatories to the Chesapeake Bay Agreement in developing and implementing specific action plans to carry out the responsibilities of the signatories to the Chesapeake Bay Agreement;

(iv) coordinating the actions of the Environmental Protection Agency with the actions of the appropriate officials of other Federal agencies and State and local authorities in developing strategies to—

(I) improve the water quality and living resources in the Chesapeake Bay ecosystem; and

(II) obtain the support of the appropriate officials of the agencies and authorities in achieving the objectives of the Chesapeake Bay Agreement; and

(v) implementing outreach programs for public information, education, and participation to foster stewardship of the resources of the Chesapeake Bay.

(c) Interagency agreements

The Administrator may enter into an interagency agreement with a Federal agency to carry out this section.

(d) Technical assistance and assistance grants**(1) In general**

In cooperation with the Chesapeake Executive Council, the Administrator may provide technical assistance, and assistance grants, to nonprofit organizations, State and local governments, colleges, universities, and interstate agencies to carry out this section, subject to such terms and conditions as the Administrator considers appropriate.

(2) Federal share**(A) In general**

Except as provided in subparagraph (B), the Federal share of an assistance grant provided under paragraph (1) shall be determined by the Administrator in accordance with guidance issued by the Administrator.

(B) Small watershed grants program

The Federal share of an assistance grant provided under paragraph (1) to carry out an implementing activity under subsection (g)(2) of this section shall not exceed 75 percent of eligible project costs, as determined by the Administrator.

(3) Non-Federal share

An assistance grant under paragraph (1) shall be provided on the condition that non-Federal sources provide the remainder of eligible project costs, as determined by the Administrator.

(4) Administrative costs

Administrative costs shall not exceed 10 percent of the annual grant award.

(e) Implementation and monitoring grants**(1) In general**

If a signatory jurisdiction has approved and committed to implement all or substantially all aspects of the Chesapeake Bay Agreement, on the request of the chief executive of the jurisdiction, the Administrator—

(A) shall make a grant to the jurisdiction for the purpose of implementing the management mechanisms established under the Chesapeake Bay Agreement, subject to such terms and conditions as the Administrator considers appropriate; and

(B) may make a grant to a signatory jurisdiction for the purpose of monitoring the Chesapeake Bay ecosystem.

(2) Proposals**(A) In general**

A signatory jurisdiction described in paragraph (1) may apply for a grant under this subsection for a fiscal year by submitting to the Administrator a comprehensive proposal to implement management mechanisms established under the Chesapeake Bay Agreement.

(B) Contents

A proposal under subparagraph (A) shall include—

(i) a description of proposed management mechanisms that the jurisdiction commits to take within a specified time period, such as reducing or preventing pollution in the Chesapeake Bay and its watershed or meeting applicable water quality standards or established goals and objectives under the Chesapeake Bay Agreement; and

(ii) the estimated cost of the actions proposed to be taken during the fiscal year.

(3) Approval

If the Administrator finds that the proposal is consistent with the Chesapeake Bay Agreement and the national goals established under section 1251(a) of this title, the Administrator may approve the proposal for an award.

(4) Federal share

The Federal share of a grant under this subsection shall not exceed 50 percent of the cost of implementing the management mechanisms during the fiscal year.

(5) Non-Federal share

A grant under this subsection shall be made on the condition that non-Federal sources provide the remainder of the costs of implementing the management mechanisms during the fiscal year.

(6) Administrative costs

Administrative costs shall not exceed 10 percent of the annual grant award.

(7) Reporting

On or before October 1 of each fiscal year, the Administrator shall make available to the public a document that lists and describes, in the greatest practicable degree of detail—

(A) all projects and activities funded for the fiscal year;

(B) the goals and objectives of projects funded for the previous fiscal year; and

(C) the net benefits of projects funded for previous fiscal years.

(f) Federal facilities and budget coordination**(1) Subwatershed planning and restoration**

A Federal agency that owns or operates a facility (as defined by the Administrator) within the Chesapeake Bay watershed shall participate in regional and subwatershed planning and restoration programs.

(2) Compliance with agreement

The head of each Federal agency that owns or occupies real property in the Chesapeake Bay watershed shall ensure that the property, and actions taken by the agency with respect to the property, comply with the Chesapeake Bay Agreement, the Federal Agencies Chesapeake Ecosystem Unified Plan, and any subsequent agreements and plans.

(3) Budget coordination**(A) In general**

As part of the annual budget submission of each Federal agency with projects or grants related to restoration, planning, monitoring, or scientific investigation of the Chesapeake Bay ecosystem, the head of the agency shall submit to the President a report that de-

scribes plans for the expenditure of the funds under this section.

(B) Disclosure to the Council

The head of each agency referred to in subparagraph (A) shall disclose the report under that subparagraph with the Chesapeake Executive Council as appropriate.

(g) Chesapeake Bay Program

(1) Management strategies

The Administrator, in coordination with other members of the Chesapeake Executive Council, shall ensure that management plans are developed and implementation is begun by signatories to the Chesapeake Bay Agreement to achieve and maintain—

(A) the nutrient goals of the Chesapeake Bay Agreement for the quantity of nitrogen and phosphorus entering the Chesapeake Bay and its watershed;

(B) the water quality requirements necessary to restore living resources in the Chesapeake Bay ecosystem;

(C) the Chesapeake Bay Basinwide Toxins Reduction and Prevention Strategy goal of reducing or eliminating the input of chemical contaminants from all controllable sources to levels that result in no toxic or bioaccumulative impact on the living resources of the Chesapeake Bay ecosystem or on human health;

(D) habitat restoration, protection, creation, and enhancement goals established by Chesapeake Bay Agreement signatories for wetlands, riparian forests, and other types of habitat associated with the Chesapeake Bay ecosystem; and

(E) the restoration, protection, creation, and enhancement goals established by the Chesapeake Bay Agreement signatories for living resources associated with the Chesapeake Bay ecosystem.

(2) Small watershed grants program

The Administrator, in cooperation with the Chesapeake Executive Council, shall—

(A) establish a small watershed grants program as part of the Chesapeake Bay Program; and

(B) offer technical assistance and assistance grants under subsection (d) of this section to local governments and nonprofit organizations and individuals in the Chesapeake Bay region to implement—

(i) cooperative tributary basin strategies that address the water quality and living resource needs in the Chesapeake Bay ecosystem; and

(ii) locally based protection and restoration programs or projects within a watershed that complement the tributary basin strategies, including the creation, restoration, protection, or enhancement of habitat associated with the Chesapeake Bay ecosystem.

(h) Study of Chesapeake Bay Program

(1) In general

Not later than April 22, 2003, and every 5 years thereafter, the Administrator, in coordination with the Chesapeake Executive Council,

shall complete a study and submit to Congress a comprehensive report on the results of the study.

(2) Requirements

The study and report shall—

(A) assess the state of the Chesapeake Bay ecosystem;

(B) compare the current state of the Chesapeake Bay ecosystem with its state in 1975, 1985, and 1995;

(C) assess the effectiveness of management strategies being implemented on November 7, 2000, and the extent to which the priority needs are being met;

(D) make recommendations for the improved management of the Chesapeake Bay Program either by strengthening strategies being implemented on November 7, 2000, or by adopting new strategies; and

(E) be presented in such a format as to be readily transferable to and usable by other watershed restoration programs.

(i) Special study of living resource response

(1) In general

Not later than 180 days after November 7, 2000, the Administrator shall commence a 5-year special study with full participation of the scientific community of the Chesapeake Bay to establish and expand understanding of the response of the living resources of the Chesapeake Bay ecosystem to improvements in water quality that have resulted from investments made through the Chesapeake Bay Program.

(2) Requirements

The study shall—

(A) determine the current status and trends of living resources, including grasses, benthos, phytoplankton, zooplankton, fish, and shellfish;

(B) establish to the extent practicable the rates of recovery of the living resources in response to improved water quality condition;

(C) evaluate and assess interactions of species, with particular attention to the impact of changes within and among trophic levels; and

(D) recommend management actions to optimize the return of a healthy and balanced ecosystem in response to improvements in the quality and character of the waters of the Chesapeake Bay.

(j) Authorization of appropriations

There is authorized to be appropriated to carry out this section \$40,000,000 for each of fiscal years 2001 through 2005. Such sums shall remain available until expended.

(June 30, 1948, ch. 758, title I, § 117, as added Pub. L. 100-4, title I, § 103, Feb. 4, 1987, 101 Stat. 10; amended Pub. L. 106-457, title II, § 203, Nov. 7, 2000, 114 Stat. 1967.)

CODIFICATION

November 7, 2000, referred to in subsecs. (h)(2)(C), (D), and (i)(1), was in the original “the date of enactment of this section”, which was translated as meaning the date of enactment of Pub. L. 106-457, which amended

§ 1288. Areawide waste treatment management**(a) Identification and designation of areas having substantial water quality control problems**

For the purpose of encouraging and facilitating the development and implementation of areawide waste treatment management plans—

(1) The Administrator, within ninety days after October 18, 1972, and after consultation with appropriate Federal, State, and local authorities, shall by regulation publish guidelines for the identification of those areas which, as a result of urban-industrial concentrations or other factors, have substantial water quality control problems.

(2) The Governor of each State, within sixty days after publication of the guidelines issued pursuant to paragraph (1) of this subsection, shall identify each area within the State which, as a result of urban-industrial concentrations or other factors, has substantial water quality control problems. Not later than one hundred and twenty days following such identification and after consultation with appropriate elected and other officials of local governments having jurisdiction in such areas, the Governor shall designate (A) the boundaries of each such area, and (B) a single representative organization, including elected officials from local governments or their designees, capable of developing effective areawide waste treatment management plans for such area. The Governor may in the same manner at any later time identify any additional area (or modify an existing area) for which he determines areawide waste treatment management to be appropriate, designate the boundaries of such area, and designate an organization capable of developing effective areawide waste treatment management plans for such area.

(3) With respect to any area which, pursuant to the guidelines published under paragraph (1) of this subsection, is located in two or more States, the Governors of the respective States shall consult and cooperate in carrying out the provisions of paragraph (2), with a view toward designating the boundaries of the interstate area having common water quality control problems and for which areawide waste treatment management plans would be most effective, and toward designating, within one hundred and eighty days after publication of guidelines issued pursuant to paragraph (1) of this subsection, of a single representative organization capable of developing effective areawide waste treatment management plans for such area.

(4) If a Governor does not act, either by designating or determining not to make a designation under paragraph (2) of this subsection, within the time required by such paragraph, or if, in the case of an interstate area, the Governors of the States involved do not designate a planning organization within the time required by paragraph (3) of this subsection, the chief elected officials of local governments within an area may by agreement designate (A) the boundaries for such an area, and (B) a single representative organization

including elected officials from such local governments, or their designees, capable of developing an areawide waste treatment management plan for such area.

(5) Existing regional agencies may be designated under paragraphs (2), (3), and (4) of this subsection.

(6) The State shall act as a planning agency for all portions of such State which are not designated under paragraphs (2), (3), or (4) of this subsection.

(7) Designations under this subsection shall be subject to the approval of the Administrator.

(b) Planning process

(1)(A) Not later than one year after the date of designation of any organization under subsection (a) of this section such organization shall have in operation a continuing areawide waste treatment management planning process consistent with section 1281 of this title. Plans prepared in accordance with this process shall contain alternatives for waste treatment management, and be applicable to all wastes generated within the area involved. The initial plan prepared in accordance with such process shall be certified by the Governor and submitted to the Administrator not later than two years after the planning process is in operation.

(B) For any agency designated after 1975 under subsection (a) of this section and for all portions of a State for which the State is required to act as the planning agency in accordance with subsection (a)(6) of this section, the initial plan prepared in accordance with such process shall be certified by the Governor and submitted to the Administrator not later than three years after the receipt of the initial grant award authorized under subsection (f) of this section.

(2) Any plan prepared under such process shall include, but not be limited to—

(A) the identification of treatment works necessary to meet the anticipated municipal and industrial waste treatment needs of the area over a twenty-year period, annually updated (including an analysis of alternative waste treatment systems), including any requirements for the acquisition of land for treatment purposes; the necessary waste water collection and urban storm water runoff systems; and a program to provide the necessary financial arrangements for the development of such treatment works, and an identification of open space and recreation opportunities that can be expected to result from improved water quality, including consideration of potential use of lands associated with treatment works and increased access to water-based recreation;

(B) the establishment of construction priorities for such treatment works and time schedules for the initiation and completion of all treatment works;

(C) the establishment of a regulatory program to—

(i) implement the waste treatment management requirements of section 1281(c) of this title,

(ii) regulate the location, modification, and construction of any facilities within

such area which may result in any discharge in such area, and

(iii) assure that any industrial or commercial wastes discharged into any treatment works in such area meet applicable pretreatment requirements;

(D) the identification of those agencies necessary to construct, operate, and maintain all facilities required by the plan and otherwise to carry out the plan;

(E) the identification of the measures necessary to carry out the plan (including financing), the period of time necessary to carry out the plan, the costs of carrying out the plan within such time, and the economic, social, and environmental impact of carrying out the plan within such time;

(F) a process to (i) identify, if appropriate, agriculturally and silviculturally 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;

(G) a process to (i) identify, if appropriate, mine-related sources of pollution including new, current, and abandoned surface and underground mine runoff, and (ii) set forth procedures and methods (including land use requirements) to control to the extent feasible such sources;

(H) a process to (i) identify construction activity related sources of pollution, and (ii) set forth procedures and methods (including land use requirements) to control to the extent feasible such sources;

(I) a process to (i) identify, if appropriate, salt water intrusion into rivers, lakes, and estuaries resulting from reduction of fresh water flow from any cause, including irrigation, obstruction, ground water extraction, and diversion, and (ii) set forth procedures and methods to control such intrusion to the extent feasible where such procedures and methods are otherwise a part of the waste treatment management plan;

(J) a process to control the disposition of all residual waste generated in such area which could affect water quality; and

(K) a process to control the disposal of pollutants on land or in subsurface excavations within such area to protect ground and surface water quality.

(3) Areawide waste treatment management plans shall be certified annually by the Governor or his designee (or Governors or their designees, where more than one State is involved) as being consistent with applicable basin plans and such areawide waste treatment management plans shall be submitted to the Administrator for his approval.

(4)(A) Whenever the Governor of any State determines (and notifies the Administrator) that consistency with a statewide regulatory program under section 1313 of this title so requires, the requirements of clauses (F) through (K) of paragraph (2) of this subsection shall be devel-

oped and submitted by the Governor to the Administrator for approval for application to a class or category of activity throughout such State.

(B) Any program submitted under subparagraph (A) of this paragraph which, in whole or in part, is to control the discharge or other placement of dredged or fill material into the navigable waters shall include the following:

(i) A consultation process which includes the State agency with primary jurisdiction over fish and wildlife resources.

(ii) A process to identify and manage the discharge or other placement of dredged or fill material which adversely affects navigable waters, which shall complement and be coordinated with a State program under section 1344 of this title conducted pursuant to this chapter.

(iii) A process to assure that any activity conducted pursuant to a best management practice will comply with the guidelines established under section 1344(b)(1) of this title, and sections 1317 and 1343 of this title.

(iv) A process to assure that any activity conducted pursuant to a best management practice can be terminated or modified for cause including, but not limited to, the following:

(I) violation of any condition of the best management practice;

(II) change in any activity that requires either a temporary or permanent reduction or elimination of the discharge pursuant to the best management practice.

(v) A process to assure continued coordination with Federal and Federal-State water-related planning and reviewing processes, including the National Wetlands Inventory.

(C) If the Governor of a State obtains approval from the Administrator of a statewide regulatory program which meets the requirements of subparagraph (B) of this paragraph and if such State is administering a permit program under section 1344 of this title, no person shall be required to obtain an individual permit pursuant to such section, or to comply with a general permit issued pursuant to such section, with respect to any appropriate activity within such State for which a best management practice has been approved by the Administrator under the program approved by the Administrator pursuant to this paragraph.

(D)(i) Whenever the Administrator determines after public hearing that a State is not administering a program approved under this section in accordance with the requirements of this section, the Administrator shall so notify the State, and if appropriate corrective action is not taken within a reasonable time, not to exceed ninety days, the Administrator shall withdraw approval of such program. The Administrator shall not withdraw approval of any such program unless he shall first have notified the State, and made public, in writing, the reasons for such withdrawal.

(ii) In the case of a State with a program submitted and approved under this paragraph, the Administrator shall withdraw approval of such program under this subparagraph only for a sub-

stantial failure of the State to administer its program in accordance with the requirements of this paragraph.

(c) Regional operating agencies

(1) The Governor of each State, in consultation with the planning agency designated under subsection (a) of this section, at the time a plan is submitted to the Administrator, shall designate one or more waste treatment management agencies (which may be an existing or newly created local, regional, or State agency or political subdivision) for each area designated under subsection (a) of this section and submit such designations to the Administrator.

(2) The Administrator shall accept any such designation, unless, within 120 days of such designation, he finds that the designated management agency (or agencies) does not have adequate authority—

(A) to carry out appropriate portions of an areawide waste treatment management plan developed under subsection (b) of this section;

(B) to manage effectively waste treatment works and related facilities serving such area in conformance with any plan required by subsection (b) of this section;

(C) directly or by contract, to design and construct new works, and to operate and maintain new and existing works as required by any plan developed pursuant to subsection (b) of this section;

(D) to accept and utilize grants, or other funds from any source, for waste treatment management purposes;

(E) to raise revenues, including the assessment of waste treatment charges;

(F) to incur short- and long-term indebtedness;

(G) to assure in implementation of an area-wide waste treatment management plan that each participating community pays its proportionate share of treatment costs;

(H) to refuse to receive any wastes from any municipality or subdivision thereof, which does not comply with any provisions of an approved plan under this section applicable to such area; and

(I) to accept for treatment industrial wastes.

(d) Conformity of works with area plan

After a waste treatment management agency having the authority required by subsection (c) of this section has been designated under such subsection for an area and a plan for such area has been approved under subsection (b) of this section, the Administrator shall not make any grant for construction of a publicly owned treatment works under section 1281(g)(1) of this title within such area except to such designated agency and for works in conformity with such plan.

(e) Permits not to conflict with approved plans

No permit under section 1342 of this title shall be issued for any point source which is in conflict with a plan approved pursuant to subsection (b) of this section.

(f) Grants

(1) The Administrator shall make grants to any agency designated under subsection (a) of

this section for payment of the reasonable costs of developing and operating a continuing area-wide waste treatment management planning process under subsection (b) of this section.

(2) For the two-year period beginning on the date the first grant is made under paragraph (1) of this subsection to an agency, if such first grant is made before October 1, 1977, the amount of each such grant to such agency shall be 100 per centum of the costs of developing and operating a continuing areawide waste treatment management planning process under subsection (b) of this section, and thereafter the amount granted to such agency shall not exceed 75 per centum of such costs in each succeeding one-year period. In the case of any other grant made to an agency under such paragraph (1) of this subsection, the amount of such grant shall not exceed 75 per centum of the costs of developing and operating a continuing areawide waste treatment management planning process in any year.

(3) Each applicant for a grant under this subsection shall submit to the Administrator for his approval each proposal for which a grant is applied for under this subsection. The Administrator shall act upon such proposal as soon as practicable after it has been submitted, and his approval of that proposal shall be deemed a contractual obligation of the United States for the payment of its contribution to such proposal, subject to such amounts as are provided in appropriation Acts. There is authorized to be appropriated to carry out this subsection not to exceed \$50,000,000 for the fiscal year ending June 30, 1973, not to exceed \$100,000,000 for the fiscal year ending June 30, 1974, not to exceed \$150,000,000 per fiscal year for the fiscal years ending June 30, 1975, September 30, 1977, September 30, 1978, September 30, 1979, and September 30, 1980, not to exceed \$100,000,000 per fiscal year for the fiscal years ending September 30, 1981, and September 30, 1982, and such sums as may be necessary for fiscal years 1983 through 1990.

(g) Technical assistance by Administrator

The Administrator is authorized, upon request of the Governor or the designated planning agency, and without reimbursement, to consult with, and provide technical assistance to, any agency designated under subsection (a) of this section in the development of areawide waste treatment management plans under subsection (b) of this section.

(h) Technical assistance by Secretary of the Army

(1) The Secretary of the Army, acting through the Chief of Engineers, in cooperation with the Administrator is authorized and directed, upon request of the Governor or the designated planning organization, to consult with, and provide technical assistance to, any agency designed¹ under subsection (a) of this section in developing and operating a continuing areawide waste treatment management planning process under subsection (b) of this section.

(2) There is authorized to be appropriated to the Secretary of the Army, to carry out this subsection, not to exceed \$50,000,000 per fiscal

¹ So in original. Probably should be "designated".

year for the fiscal years ending June 30, 1973, and June 30, 1974.

(i) State best management practices program

(1) The Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service, shall, upon request of the Governor of a State, and without reimbursement, provide technical assistance to such State in developing a statewide program for submission to the Administrator under subsection (b)(4)(B) of this section and in implementing such program after its approval.

(2) There is authorized to be appropriated to the Secretary of the Interior \$6,000,000 to complete the National Wetlands Inventory of the United States, by December 31, 1981, and to provide information from such Inventory to States as it becomes available to assist such States in the development and operation of programs under this chapter.

(j) Agricultural cost sharing

(1) The Secretary of Agriculture, with the concurrence of the Administrator, and acting through the Soil Conservation Service and such other agencies of the Department of Agriculture as the Secretary may designate, is authorized and directed to establish and administer a program to enter into contracts, subject to such amounts as are provided in advance by appropriation acts, of not less than five years nor more than ten years with owners and operators having control of rural land for the purpose of installing and maintaining measures incorporating best management practices to control nonpoint source pollution for improved water quality in those States or areas for which the Administrator has approved a plan under subsection (b) of this section where the practices to which the contracts apply are certified by the management agency designated under subsection (c)(1) of this section to be consistent with such plans and will result in improved water quality. Such contracts may be entered into during the period ending not later than September 31, 1988. Under such contracts the land owner or operator shall agree—

(i) to effectuate a plan approved by a soil conservation district, where one exists, under this section for his farm, ranch, or other land substantially in accordance with the schedule outlined therein unless any requirement thereof is waived or modified by the Secretary;

(ii) to forfeit all rights to further payments or grants under the contract and refund to the United States all payments and grants received thereunder, with interest, upon his violation of the contract at any stage during the time he has control of the land if the Secretary, after considering the recommendations of the soil conservation district, where one exists, and the Administrator, determines that such violation is of such a nature as to warrant termination of the contract, or to make refunds or accept such payment adjustments as the Secretary may deem appropriate if he determines that the violation by the owner or operator does not warrant termination of the contract;

(iii) upon transfer of his right and interest in the farm, ranch, or other land during the con-

tract period to forfeit all rights to further payments or grants under the contract and refund to the United States all payments or grants received thereunder, with interest, unless the transferee of any such land agrees with the Secretary to assume all obligations of the contract;

(iv) not to adopt any practice specified by the Secretary on the advice of the Administrator in the contract as a practice which would tend to defeat the purposes of the contract;

(v) to such additional provisions as the Secretary determines are desirable and includes in the contract to effectuate the purposes of the program or to facilitate the practical administration of the program.

(2) In return for such agreement by the landowner or operator the Secretary shall agree to provide technical assistance and share the cost of carrying out those conservation practices and measures set forth in the contract for which he determines that cost sharing is appropriate and in the public interest and which are approved for cost sharing by the agency designated to implement the plan developed under subsection (b) of this section. The portion of such cost (including labor) to be shared shall be that part which the Secretary determines is necessary and appropriate to effectuate the installation of the water quality management practices and measures under the contract, but not to exceed 50 per centum of the total cost of the measures set forth in the contract; except the Secretary may increase the matching cost share where he determines that (1) the main benefits to be derived from the measures are related to improving off-site water quality, and (2) the matching share requirement would place a burden on the landowner which would probably prevent him from participating in the program.

(3) The Secretary may terminate any contract with a landowner or operator by mutual agreement with the owner or operator if the Secretary determines that such termination would be in the public interest, and may agree to such modification of contracts previously entered into as he may determine to be desirable to carry out the purposes of the program or facilitate the practical administration thereof or to accomplish equitable treatment with respect to other conservation, land use, or water quality programs.

(4) In providing assistance under this subsection the Secretary will give priority to those areas and sources that have the most significant effect upon water quality. Additional investigations or plans may be made, where necessary, to supplement approved water quality management plans, in order to determine priorities.

(5) The Secretary shall, where practicable, enter into agreements with soil conservation districts, State soil and water conservation agencies, or State water quality agencies to administer all or part of the program established in this subsection under regulations developed by the Secretary. Such agreements shall provide for the submission of such reports as the Secretary deems necessary, and for payment by the United States of such portion of the costs incurred in the administration of the program as the Secretary may deem appropriate.

(6) The contracts under this subsection shall be entered into only in areas where the management agency designated under subsection (c)(1) of this section assures an adequate level of participation by owners and operators having control of rural land in such areas. Within such areas the local soil conservation district, where one exists, together with the Secretary of Agriculture, will determine the priority of assistance among individual land owners and operators to assure that the most critical water quality problems are addressed.

(7) The Secretary, in consultation with the Administrator and subject to section 1314(k) of this title, shall, not later than September 30, 1978, promulgate regulations for carrying out this subsection and for support and cooperation with other Federal and non-Federal agencies for implementation of this subsection.

(8) This program shall not be used to authorize or finance projects that would otherwise be eligible for assistance under the terms of Public Law 83-566 [16 U.S.C. 1001 et seq.].

(9) There are hereby authorized to be appropriated to the Secretary of Agriculture \$200,000,000 for fiscal year 1979, \$400,000,000 for fiscal year 1980, \$100,000,000 for fiscal year 1981, \$100,000,000 for fiscal year 1982, and such sums as may be necessary for fiscal years 1983 through 1990, to carry out this subsection. The program authorized under this subsection shall be in addition to, and not in substitution of, other programs in such area authorized by this or any other public law.

(June 30, 1948, ch. 758, title II, §208, as added Pub. L. 92-500, §2, Oct. 18, 1972, 86 Stat. 839; amended Pub. L. 95-217, §§4(e), 31, 32, 33(a), 34, 35, Dec. 27, 1977, 91 Stat. 1566, 1576-1579; Pub. L. 96-483, §1(d), (e), Oct. 21, 1980, 94 Stat. 2360; Pub. L. 100-4, title I, §101(d), (e), Feb. 4, 1987, 101 Stat. 9.)

REFERENCES IN TEXT

Public Law 83-566, referred to in subsec. (j)(8), is act Aug. 4, 1954, ch. 656, 68 Stat. 666, as amended, known as the Watershed Protection and Flood Prevention Act, which is classified generally to chapter 18 (§1001 et seq.) of Title 16, Conservation. For complete classification of this Act to the Code, see Short Title note set out under section 1001 of Title 16 and Tables.

AMENDMENTS

1987—Subsec. (f)(3). Pub. L. 100-4, §101(d), struck out “and” after “1974,” and “1980,” and inserted “, and such sums as may be necessary for fiscal years 1983 through 1990” after “1982”.

Subsec. (j)(9). Pub. L. 100-4, §101(e), struck out “and” after “1981,” and inserted “and such sums as may be necessary for fiscal years 1983 through 1990,” after “1982.”

1980—Subsec. (f)(3). Pub. L. 96-483, §1(d), inserted authorization of not to exceed \$100,000,000 per fiscal year for fiscal years ending Sept. 30, 1981 and 1982.

Subsec. (j)(9). Pub. L. 96-483, §1(e), inserted reference to authorization of \$100,000,000 for each of fiscal years 1981 and 1982.

1977—Subsec. (b)(1). Pub. L. 95-217, §31(a), designated existing provisions as subpar. (A) and added subpar. (B).

Subsec. (b)(2)(A). Pub. L. 95-217, §32, inserted “, and an identification of open space and recreation opportunities that can be expected to result from improved water quality, including consideration of potential use of lands associated with treatment works and increased access to water-based recreation” after “development of such treatment works”.

Subsec. (b)(2)(F). Pub. L. 95-217, §33(a), substituted “sources of pollution, including return flows from irrigated agriculture, and their cumulative effects,” for “sources of pollution, including”.

Subsec. (b)(4). Pub. L. 95-217, §34(a), designated existing provisions as subpar. (A), substituted “to the Administrator for approval for application to a class or category of activity throughout such State” for “to the Administrator for application to all regions within such State”, and added subpars. (B) to (D).

Subsec. (f)(2). Pub. L. 95-217, §31(b), substituted “For the two-year period beginning on the date the first grant is made under paragraph (1) of this subsection to an agency, if such first grant is made before October 1, 1977, the amount of each such grant to such agency shall be 100 per centum of the costs of developing and operating a continuing areawide waste treatment management planning process under subsection (b) of this section, and thereafter the amount granted to such agency shall not exceed 75 per centum of such costs in each succeeding one-year period” for “The amount granted to any agency under paragraph (1) of this subsection shall be 100 per centum of the costs of developing and operating a continuing areawide waste treatment management planning process under subsection (b) of this section for each of the fiscal years ending on June 30, 1973, June 30, 1974, and June 30, 1975, and shall not exceed 75 per centum of such costs in each succeeding fiscal year” and inserted “In the case of any other grant made to an agency under such paragraph (1) of this subsection, the amount of such grant shall not exceed 75 per centum of the costs of developing and operating a continuing areawide waste treatment management planning process in any year.”

Subsec. (f)(3). Pub. L. 95-217, §§4(e), 31(c), substituted “and not to exceed \$150,000,000 per fiscal year for the fiscal years ending June 30, 1975, September 30, 1977, September 30, 1978, September 30, 1979, and September 30, 1980” for “and not to exceed \$150,000,000 for the fiscal year ending June 30, 1975” and inserted “subject to such amounts as are provided in appropriation Acts” after “contractual obligation of the United States for the payment of its contribution to such proposal”.

Subsec. (i). Pub. L. 95-217, §34(b), added subsec. (i).

Subsec. (j). Pub. L. 95-217, §35, added subsec. (j).

TRANSFER OF FUNCTIONS

Enforcement functions of Secretary or other official in Department of Agriculture, insofar as they involve lands and programs under jurisdiction of that Department, relating to compliance with this chapter with respect to pre-construction, construction, and initial operation of transportation system for Canadian and Alaskan natural gas were transferred to the Federal Inspector, Office of Federal Inspector for the Alaska Natural Gas Transportation System, until the first anniversary of the date of initial operation of the Alaska Natural Gas Transportation System, see Reorg. Plan No. 1 of 1979, §§102(f), 203(a), 44 F.R. 33663, 33666, 93 Stat. 1373, 1376, effective July 1, 1979, set out in the Appendix to Title 5, Government Organization and Employees. Office of Federal Inspector for the Alaska Natural Gas Transportation System abolished and functions and authority vested in Inspector transferred to Secretary of Energy by section 3012(b) of Pub. L. 102-486, set out as an Abolition of Office of Federal Inspector note under section 719e of Title 15, Commerce and Trade. Functions and authority vested in Secretary of Energy subsequently transferred to Federal Coordinator for Alaska Natural Gas Transportation Projects by section 720d(f) of Title 15.

§ 1289. Basin planning

(a) Preparation of Level B plans

The President, acting through the Water Resources Council, shall, as soon as practicable, prepare a Level B plan under the Water Resources Planning Act [42 U.S.C. 1962 et seq.] for

(A) Not to exceed \$250,000,000 for making grants to municipalities and municipal entities under subsection (a)(2) of this section, in accordance with the criteria set forth in subsection (b) of this section.

(B) All remaining amounts for making grants to States under subsection (a)(1) of this section, in accordance with a formula to be established by the Administrator, after providing notice and an opportunity for public comment, that allocates to each State a proportional share of such amounts based on the total needs of the State for municipal combined sewer overflow controls and sanitary sewer overflow controls identified in the most recent survey conducted pursuant to section 1375(b)(1) of this title.

(h) Administrative expenses

Of the amounts appropriated to carry out this section for each fiscal year—

(1) the Administrator may retain an amount not to exceed 1 percent for the reasonable and necessary costs of administering this section; and

(2) the Administrator, or a State, may retain an amount not to exceed 4 percent of any grant made to a municipality or municipal entity under subsection (a) of this section, for the reasonable and necessary costs of administering the grant.

(i) Reports

Not later than December 31, 2003, and periodically thereafter, the Administrator shall transmit to Congress a report containing recommended funding levels for grants under this section. The recommended funding levels shall be sufficient to ensure the continued expeditious implementation of municipal combined sewer overflow and sanitary sewer overflow controls nationwide.

(June 30, 1948, ch. 758, title II, § 221, as added Pub. L. 106-554, § 1(a)(4) [div. B, title I, § 112(c)], Dec. 21, 2000, 114 Stat. 2763, 2763A-225.)

INFORMATION ON CSOS AND SSOS

Pub. L. 106-554, § 1(a)(4) [div. B, title I, § 112(d)], Dec. 21, 2000, 114 Stat. 2763, 2763A-227, provided that:

“(1) **REPORT TO CONGRESS.**—Not later than 3 years after the date of enactment of this Act [Dec. 21, 2000], the Administrator of the Environmental Protection Agency shall transmit to Congress a report summarizing—

“(A) the extent of the human health and environmental impacts caused by municipal combined sewer overflows and sanitary sewer overflows, including the location of discharges causing such impacts, the volume of pollutants discharged, and the constituents discharged;

“(B) the resources spent by municipalities to address these impacts; and

“(C) an evaluation of the technologies used by municipalities to address these impacts.

“(2) **TECHNOLOGY CLEARINGHOUSE.**—After transmitting a report under paragraph (1), the Administrator shall maintain a clearinghouse of cost-effective and efficient technologies for addressing human health and environmental impacts due to municipal combined sewer overflows and sanitary sewer overflows.”

SUBCHAPTER III—STANDARDS AND ENFORCEMENT

§ 1311. Effluent limitations

(a) Illegality of pollutant discharges except in compliance with law

Except as in compliance with this section and sections 1312, 1316, 1317, 1328, 1342, and 1344 of this title, the discharge of any pollutant by any person shall be unlawful.

(b) Timetable for achievement of objectives

In order to carry out the objective of this chapter there shall be achieved—

(1)(A) not later than July 1, 1977, effluent limitations for point sources, other than publicly owned treatment works, (i) which shall require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 1314(b) of this title, or (ii) in the case of a discharge into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, which shall require compliance with any applicable pretreatment requirements and any requirements under section 1317 of this title; and

(B) for publicly owned treatment works in existence on July 1, 1977, or approved pursuant to section 1283 of this title prior to June 30, 1974 (for which construction must be completed within four years of approval), effluent limitations based upon secondary treatment as defined by the Administrator pursuant to section 1314(d)(1) of this title; or,

(C) not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title) or any other Federal law or regulation, or required to implement any applicable water quality standard established pursuant to this chapter.

(2)(A) for pollutants identified in subparagraphs (C), (D), and (F) of this paragraph, effluent limitations for categories and classes of point sources, other than publicly owned treatment works, which (i) shall require application of the best available technology economically achievable for such category or class, which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(2) of this title, which such effluent limitations shall require the elimination of discharges of all pollutants if the Administrator finds, on the basis of information available to him (including information developed pursuant to section 1325 of this title), that such elimination is technologically and economically achievable for a category or class of point sources as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(2) of this title, or (ii) in the case of the introduction of a pollutant into a publicly owned treatment works which meets the requirements of subparagraph

(B) of this paragraph, shall require compliance with any applicable pretreatment requirements and any other requirement under section 1317 of this title;

(B) Repealed. Pub. L. 97-117, §21(b), Dec. 29, 1981, 95 Stat. 1632.

(C) with respect to all toxic pollutants referred to in table 1 of Committee Print Numbered 95-30 of the Committee on Public Works and Transportation of the House of Representatives compliance with effluent limitations in accordance with subparagraph (A) of this paragraph as expeditiously as practicable but in no case later than three years after the date such limitations are promulgated under section 1314(b) of this title, and in no case later than March 31, 1989;

(D) for all toxic pollutants listed under paragraph (1) of subsection (a) of section 1317 of this title which are not referred to in subparagraph (C) of this paragraph compliance with effluent limitations in accordance with subparagraph (A) of this paragraph as expeditiously as practicable, but in no case later than three years after the date such limitations are promulgated under section 1314(b) of this title, and in no case later than March 31, 1989;

(E) as expeditiously as practicable but in no case later than three years after the date such limitations are promulgated under section 1314(b) of this title, and in no case later than March 31, 1989, compliance with effluent limitations for categories and classes of point sources, other than publicly owned treatment works, which in the case of pollutants identified pursuant to section 1314(a)(4) of this title shall require application of the best conventional pollutant control technology as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(4) of this title; and

(F) for all pollutants (other than those subject to subparagraphs (C), (D), or (E) of this paragraph) compliance with effluent limitations in accordance with subparagraph (A) of this paragraph as expeditiously as practicable but in no case later than 3 years after the date such limitations are established, and in no case later than March 31, 1989.

(3)(A) for effluent limitations under paragraph (1)(A)(i) of this subsection promulgated after January 1, 1982, and requiring a level of control substantially greater or based on fundamentally different control technology than under permits for an industrial category issued before such date, compliance as expeditiously as practicable but in no case later than three years after the date such limitations are promulgated under section 1314(b) of this title, and in no case later than March 31, 1989; and

(B) for any effluent limitation in accordance with paragraph (1)(A)(i), (2)(A)(i), or (2)(E) of this subsection established only on the basis of section 1342(a)(1) of this title in a permit issued after February 4, 1987, compliance as expeditiously as practicable but in no case later than three years after the date such limitations are established, and in no case later than March 31, 1989.

(c) Modification of timetable

The Administrator may modify the requirements of subsection (b)(2)(A) of this section with respect to any point source for which a permit application is filed after July 1, 1977, upon a showing by the owner or operator of such point source satisfactory to the Administrator that such modified requirements (1) will represent the maximum use of technology within the economic capability of the owner or operator; and (2) will result in reasonable further progress toward the elimination of the discharge of pollutants.

(d) Review and revision of effluent limitations

Any effluent limitation required by paragraph (2) of subsection (b) of this section shall be reviewed at least every five years and, if appropriate, revised pursuant to the procedure established under such paragraph.

(e) All point discharge source application of effluent limitations

Effluent limitations established pursuant to this section or section 1312 of this title shall be applied to all point sources of discharge of pollutants in accordance with the provisions of this chapter.

(f) Illegality of discharge of radiological, chemical, or biological warfare agents, high-level radioactive waste, or medical waste

Notwithstanding any other provisions of this chapter it shall be unlawful to discharge any radiological, chemical, or biological warfare agent, any high-level radioactive waste, or any medical waste, into the navigable waters.

(g) Modifications for certain nonconventional pollutants

(1) General authority

The Administrator, with the concurrence of the State, may modify the requirements of subsection (b)(2)(A) of this section with respect to the discharge from any point source of ammonia, chlorine, color, iron, and total phenols (4AAP) (when determined by the Administrator to be a pollutant covered by subsection (b)(2)(F) of this section) and any other pollutant which the Administrator lists under paragraph (4) of this subsection.

(2) Requirements for granting modifications

A modification under this subsection shall be granted only upon a showing by the owner or operator of a point source satisfactory to the Administrator that—

(A) such modified requirements will result at a minimum in compliance with the requirements of subsection (b)(1)(A) or (C) of this section, whichever is applicable;

(B) such modified requirements will not result in any additional requirements on any other point or nonpoint source; and

(C) such modification will not interfere with the attainment or maintenance of that water quality which shall assure protection of public water supplies, and the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities, in and on the water and such modification will not result in the dis-

charge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity or teratogenicity), or synergistic propensities.

(3) Limitation on authority to apply for subsection (c) modification

If an owner or operator of a point source applies for a modification under this subsection with respect to the discharge of any pollutant, such owner or operator shall be eligible to apply for modification under subsection (c) of this section with respect to such pollutant only during the same time period as he is eligible to apply for a modification under this subsection.

(4) Procedures for listing additional pollutants

(A) General authority

Upon petition of any person, the Administrator may add any pollutant to the list of pollutants for which modification under this section is authorized (except for pollutants identified pursuant to section 1314(a)(4) of this title, toxic pollutants subject to section 1317(a) of this title, and the thermal component of discharges) in accordance with the provisions of this paragraph.

(B) Requirements for listing

(i) Sufficient information

The person petitioning for listing of an additional pollutant under this subsection shall submit to the Administrator sufficient information to make the determinations required by this subparagraph.

(ii) Toxic criteria determination

The Administrator shall determine whether or not the pollutant meets the criteria for listing as a toxic pollutant under section 1317(a) of this title.

(iii) Listing as toxic pollutant

If the Administrator determines that the pollutant meets the criteria for listing as a toxic pollutant under section 1317(a) of this title, the Administrator shall list the pollutant as a toxic pollutant under section 1317(a) of this title.

(iv) Nonconventional criteria determination

If the Administrator determines that the pollutant does not meet the criteria for listing as a toxic pollutant under such section and determines that adequate test methods and sufficient data are available to make the determinations required by paragraph (2) of this subsection with respect to the pollutant, the Administrator shall add the pollutant to the list of pollutants specified in paragraph (1) of this subsection for which modifications are authorized under this subsection.

(C) Requirements for filing of petitions

A petition for listing of a pollutant under this paragraph—

(i) must be filed not later than 270 days after the date of promulgation of an applicable effluent guideline under section 1314 of this title;

(ii) may be filed before promulgation of such guideline; and

(iii) may be filed with an application for a modification under paragraph (1) with respect to the discharge of such pollutant.

(D) Deadline for approval of petition

A decision to add a pollutant to the list of pollutants for which modifications under this subsection are authorized must be made within 270 days after the date of promulgation of an applicable effluent guideline under section 1314 of this title.

(E) Burden of proof

The burden of proof for making the determinations under subparagraph (B) shall be on the petitioner.

(5) Removal of pollutants

The Administrator may remove any pollutant from the list of pollutants for which modifications are authorized under this subsection if the Administrator determines that adequate test methods and sufficient data are no longer available for determining whether or not modifications may be granted with respect to such pollutant under paragraph (2) of this subsection.

(h) Modification of secondary treatment requirements

The Administrator, with the concurrence of the State, may issue a permit under section 1342 of this title which modifies the requirements of subsection (b)(1)(B) of this section with respect to the discharge of any pollutant from a publicly owned treatment works into marine waters, if the applicant demonstrates to the satisfaction of the Administrator that—

(1) there is an applicable water quality standard specific to the pollutant for which the modification is requested, which has been identified under section 1314(a)(6) of this title;

(2) the discharge of pollutants in accordance with such modified requirements will not interfere, alone or in combination with pollutants from other sources, with the attainment or maintenance of that water quality which assures protection of public water supplies and the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife, and allows recreational activities, in and on the water;

(3) the applicant has established a system for monitoring the impact of such discharge on a representative sample of aquatic biota, to the extent practicable, and the scope of such monitoring is limited to include only those scientific investigations which are necessary to study the effects of the proposed discharge;

(4) such modified requirements will not result in any additional requirements on any other point or nonpoint source;

(5) all applicable pretreatment requirements for sources introducing waste into such treatment works will be enforced;

(6) in the case of any treatment works serving a population of 50,000 or more, with respect

to any toxic pollutant introduced into such works by an industrial discharger for which pollutant there is no applicable pretreatment requirement in effect, sources introducing waste into such works are in compliance with all applicable pretreatment requirements, the applicant will enforce such requirements, and the applicant has in effect a pretreatment program which, in combination with the treatment of discharges from such works, removes the same amount of such pollutant as would be removed if such works were to apply secondary treatment to discharges and if such works had no pretreatment program with respect to such pollutant;

(7) to the extent practicable, the applicant has established a schedule of activities designed to eliminate the entrance of toxic pollutants from nonindustrial sources into such treatment works;

(8) there will be no new or substantially increased discharges from the point source of the pollutant to which the modification applies above that volume of discharge specified in the permit;

(9) the applicant at the time such modification becomes effective will be discharging effluent which has received at least primary or equivalent treatment and which meets the criteria established under section 1314(a)(1) of this title after initial mixing in the waters surrounding or adjacent to the point at which such effluent is discharged.

For the purposes of this subsection the phrase “the discharge of any pollutant into marine waters” refers to a discharge into deep waters of the territorial sea or the waters of the contiguous zone, or into saline estuarine waters where there is strong tidal movement and other hydrological and geological characteristics which the Administrator determines necessary to allow compliance with paragraph (2) of this subsection, and section 1251(a)(2) of this title. For the purposes of paragraph (9), “primary or equivalent treatment” means treatment by screening, sedimentation, and skimming adequate to remove at least 30 percent of the biological oxygen demanding material and of the suspended solids in the treatment works influent, and disinfection, where appropriate. A municipality which applies secondary treatment shall be eligible to receive a permit pursuant to this subsection which modifies the requirements of subsection (b)(1)(B) of this section with respect to the discharge of any pollutant from any treatment works owned by such municipality into marine waters. No permit issued under this subsection shall authorize the discharge of sewage sludge into marine waters. In order for a permit to be issued under this subsection for the discharge of a pollutant into marine waters, such marine waters must exhibit characteristics assuring that water providing dilution does not contain significant amounts of previously discharged effluent from such treatment works. No permit issued under this subsection shall authorize the discharge of any pollutant into saline estuarine waters which at the time of application do not support a balanced indigenous population of shellfish, fish and wildlife, or allow recreation in and on the waters or which

exhibit ambient water quality below applicable water quality standards adopted for the protection of public water supplies, shellfish, fish and wildlife or recreational activities or such other standards necessary to assure support and protection of such uses. The prohibition contained in the preceding sentence shall apply without regard to the presence or absence of a causal relationship between such characteristics and the applicant’s current or proposed discharge. Notwithstanding any other provisions of this subsection, no permit may be issued under this subsection for discharge of a pollutant into the New York Bight Apex consisting of the ocean waters of the Atlantic Ocean westward of 73 degrees 30 minutes west longitude and northward of 40 degrees 10 minutes north latitude.

(i) Municipal time extensions

(1) Where construction is required in order for a planned or existing publicly owned treatment works to achieve limitations under subsection (b)(1)(B) or (b)(1)(C) of this section, but (A) construction cannot be completed within the time required in such subsection, or (B) the United States has failed to make financial assistance under this chapter available in time to achieve such limitations by the time specified in such subsection, the owner or operator of such treatment works may request the Administrator (or if appropriate the State) to issue a permit pursuant to section 1342 of this title or to modify a permit issued pursuant to that section to extend such time for compliance. Any such request shall be filed with the Administrator (or if appropriate the State) within 180 days after February 4, 1987. The Administrator (or if appropriate the State) may grant such request and issue or modify such a permit, which shall contain a schedule of compliance for the publicly owned treatment works based on the earliest date by which such financial assistance will be available from the United States and construction can be completed, but in no event later than July 1, 1988, and shall contain such other terms and conditions, including those necessary to carry out subsections (b) through (g) of section 1281 of this title, section 1317 of this title, and such interim effluent limitations applicable to that treatment works as the Administrator determines are necessary to carry out the provisions of this chapter.

(2)(A) Where a point source (other than a publicly owned treatment works) will not achieve the requirements of subsections (b)(1)(A) and (b)(1)(C) of this section and—

(i) if a permit issued prior to July 1, 1977, to such point source is based upon a discharge into a publicly owned treatment works; or

(ii) if such point source (other than a publicly owned treatment works) had before July 1, 1977, a contract (enforceable against such point source) to discharge into a publicly owned treatment works; or

(iii) if either an application made before July 1, 1977, for a construction grant under this chapter for a publicly owned treatment works, or engineering or architectural plans or working drawings made before July 1, 1977, for a publicly owned treatment works, show that such point source was to discharge into such publicly owned treatment works,

and such publicly owned treatment works is presently unable to accept such discharge without construction, and in the case of a discharge to an existing publicly owned treatment works, such treatment works has an extension pursuant to paragraph (1) of this subsection, the owner or operator of such point source may request the Administrator (or if appropriate the State) to issue or modify such a permit pursuant to such section 1342 of this title to extend such time for compliance. Any such request shall be filed with the Administrator (or if appropriate the State) within 180 days after December 27, 1977, or the filing of a request by the appropriate publicly owned treatment works under paragraph (1) of this subsection, whichever is later. If the Administrator (or if appropriate the State) finds that the owner or operator of such point source has acted in good faith, he may grant such request and issue or modify such a permit, which shall contain a schedule of compliance for the point source to achieve the requirements of subsections (b)(1)(A) and (C) of this section and shall contain such other terms and conditions, including pretreatment and interim effluent limitations and water conservation requirements applicable to that point source, as the Administrator determines are necessary to carry out the provisions of this chapter.

(B) No time modification granted by the Administrator (or if appropriate the State) pursuant to paragraph (2)(A) of this subsection shall extend beyond the earliest date practicable for compliance or beyond the date of any extension granted to the appropriate publicly owned treatment works pursuant to paragraph (1) of this subsection, but in no event shall it extend beyond July 1, 1988; and no such time modification shall be granted unless (i) the publicly owned treatment works will be in operation and available to the point source before July 1, 1988, and will meet the requirements of subsections (b)(1)(B) and (C) of this section after receiving the discharge from that point source; and (ii) the point source and the publicly owned treatment works have entered into an enforceable contract requiring the point source to discharge into the publicly owned treatment works, the owner or operator of such point source to pay the costs required under section 1284 of this title, and the publicly owned treatment works to accept the discharge from the point source; and (iii) the permit for such point source requires that point source to meet all requirements under section 1317(a) and (b) of this title during the period of such time modification.

(j) Modification procedures

(1) Any application filed under this section for a modification of the provisions of—

(A) subsection (b)(1)(B) of this section under subsection (h) of this section shall be filed not later than¹ the 365th day which begins after December 29, 1981, except that a publicly owned treatment works which prior to December 31, 1982, had a contractual arrangement to use a portion of the capacity of an ocean outfall operated by another publicly owned treatment works which has applied for or received

modification under subsection (h) of this section, may apply for a modification of subsection (h) of this section in its own right not later than 30 days after February 4, 1987, and except as provided in paragraph (5);

(B) subsection (b)(2)(A) of this section as it applies to pollutants identified in subsection (b)(2)(F) of this section shall be filed not later than 270 days after the date of promulgation of an applicable effluent guideline under section 1314 of this title or not later than 270 days after December 27, 1977, whichever is later.

(2) Subject to paragraph (3) of this section, any application for a modification filed under subsection (g) of this section shall not operate to stay any requirement under this chapter, unless in the judgment of the Administrator such a stay or the modification sought will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistence in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity, or teratogenicity), or synergistic propensities, and that there is a substantial likelihood that the applicant will succeed on the merits of such application. In the case of an application filed under subsection (g) of this section, the Administrator may condition any stay granted under this paragraph on requiring the filing of a bond or other appropriate security to assure timely compliance with the requirements from which a modification is sought.

(3) COMPLIANCE REQUIREMENTS UNDER SUBSECTION (g).—

(A) EFFECT OF FILING.—An application for a modification under subsection (g) of this section and a petition for listing of a pollutant as a pollutant for which modifications are authorized under such subsection shall not stay the requirement that the person seeking such modification or listing comply with effluent limitations under this chapter for all pollutants not the subject of such application or petition.

(B) EFFECT OF DISAPPROVAL.—Disapproval of an application for a modification under subsection (g) of this section shall not stay the requirement that the person seeking such modification comply with all applicable effluent limitations under this chapter.

(4) DEADLINE FOR SUBSECTION (g) DECISION.—An application for a modification with respect to a pollutant filed under subsection (g) of this section must be approved or disapproved not later than 365 days after the date of such filing; except that in any case in which a petition for listing such pollutant as a pollutant for which modifications are authorized under such subsection is approved, such application must be approved or disapproved not later than 365 days after the date of approval of such petition.

(5) EXTENSION OF APPLICATION DEADLINE.—

(A) IN GENERAL.—In the 180-day period beginning on October 31, 1994, the city of San Diego, California, may apply for a modification pursuant to subsection (h) of this section of the requirements of subsection (b)(1)(B) of this section with respect to biological oxygen de-

¹ So in original. Probably should be "than".

mand and total suspended solids in the effluent discharged into marine waters.

(B) APPLICATION.—An application under this paragraph shall include a commitment by the applicant to implement a waste water reclamation program that, at a minimum, will—

(i) achieve a system capacity of 45,000,000 gallons of reclaimed waste water per day by January 1, 2010; and

(ii) result in a reduction in the quantity of suspended solids discharged by the applicant into the marine environment during the period of the modification.

(C) ADDITIONAL CONDITIONS.—The Administrator may not grant a modification pursuant to an application submitted under this paragraph unless the Administrator determines that such modification will result in removal of not less than 58 percent of the biological oxygen demand (on an annual average) and not less than 80 percent of total suspended solids (on a monthly average) in the discharge to which the application applies.

(D) PRELIMINARY DECISION DEADLINE.—The Administrator shall announce a preliminary decision on an application submitted under this paragraph not later than 1 year after the date the application is submitted.

(k) Innovative technology

In the case of any facility subject to a permit under section 1342 of this title which proposes to comply with the requirements of subsection (b)(2)(A) or (b)(2)(E) of this section by replacing existing production capacity with an innovative production process which will result in an effluent reduction significantly greater than that required by the limitation otherwise applicable to such facility and moves toward the national goal of eliminating the discharge of all pollutants, or with the installation of an innovative control technique that has a substantial likelihood for enabling the facility to comply with the applicable effluent limitation by achieving a significantly greater effluent reduction than that required by the applicable effluent limitation and moves toward the national goal of eliminating the discharge of all pollutants, or by achieving the required reduction with an innovative system that has the potential for significantly lower costs than the systems which have been determined by the Administrator to be economically achievable, the Administrator (or the State with an approved program under section 1342 of this title, in consultation with the Administrator) may establish a date for compliance under subsection (b)(2)(A) or (b)(2)(E) of this section no later than two years after the date for compliance with such effluent limitation which would otherwise be applicable under such subsection, if it is also determined that such innovative system has the potential for industrywide application.

(l) Toxic pollutants

Other than as provided in subsection (n) of this section, the Administrator may not modify any requirement of this section as it applies to any specific pollutant which is on the toxic pollutant list under section 1317(a)(1) of this title.

(m) Modification of effluent limitation requirements for point sources

(1) The Administrator, with the concurrence of the State, may issue a permit under section 1342 of this title which modifies the requirements of subsections (b)(1)(A) and (b)(2)(E) of this section, and of section 1343 of this title, with respect to effluent limitations to the extent such limitations relate to biochemical oxygen demand and pH from discharges by an industrial discharger in such State into deep waters of the territorial seas, if the applicant demonstrates and the Administrator finds that—

(A) the facility for which modification is sought is covered at the time of the enactment of this subsection by National Pollutant Discharge Elimination System permit number CA0005894 or CA0005282;

(B) the energy and environmental costs of meeting such requirements of subsections (b)(1)(A) and (b)(2)(E) of this section and section 1343 of this title exceed by an unreasonable amount the benefits to be obtained, including the objectives of this chapter;

(C) the applicant has established a system for monitoring the impact of such discharges on a representative sample of aquatic biota;

(D) such modified requirements will not result in any additional requirements on any other point or nonpoint source;

(E) there will be no new or substantially increased discharges from the point source of the pollutant to which the modification applies above that volume of discharge specified in the permit;

(F) the discharge is into waters where there is strong tidal movement and other hydrological and geological characteristics which are necessary to allow compliance with this subsection and section 1251(a)(2) of this title;

(G) the applicant accepts as a condition to the permit a contractual² obligation to use funds in the amount required (but not less than \$250,000 per year for ten years) for research and development of water pollution control technology, including but not limited to closed cycle technology;

(H) the facts and circumstances present a unique situation which, if relief is granted, will not establish a precedent or the relaxation of the requirements of this chapter applicable to similarly situated discharges; and

(I) no owner or operator of a facility comparable to that of the applicant situated in the United States has demonstrated that it would be put at a competitive disadvantage to the applicant (or the parent company or any subsidiary thereof) as a result of the issuance of a permit under this subsection.

(2) The effluent limitations established under a permit issued under paragraph (1) shall be sufficient to implement the applicable State water quality standards, to assure the protection of public water supplies and protection and propagation of a balanced, indigenous population of shellfish, fish, fauna, wildlife, and other aquatic organisms, and to allow recreational activities in and on the water. In setting such limitations,

²So in original. Probably should be “contractual”.

the Administrator shall take into account any seasonal variations and the need for an adequate margin of safety, considering the lack of essential knowledge concerning the relationship between effluent limitations and water quality and the lack of essential knowledge of the effects of discharges on beneficial uses of the receiving waters.

(3) A permit under this subsection may be issued for a period not to exceed five years, and such a permit may be renewed for one additional period not to exceed five years upon a demonstration by the applicant and a finding by the Administrator at the time of application for any such renewal that the provisions of this subsection are met.

(4) The Administrator may terminate a permit issued under this subsection if the Administrator determines that there has been a decline in ambient water quality of the receiving waters during the period of the permit even if a direct cause and effect relationship cannot be shown: *Provided*, That if the effluent from a source with a permit issued under this subsection is contributing to a decline in ambient water quality of the receiving waters, the Administrator shall terminate such permit.

(n) Fundamentally different factors

(1) General rule

The Administrator, with the concurrence of the State, may establish an alternative requirement under subsection (b)(2) of this section or section 1317(b) of this title for a facility that modifies the requirements of national effluent limitation guidelines or categorical pretreatment standards that would otherwise be applicable to such facility, if the owner or operator of such facility demonstrates to the satisfaction of the Administrator that—

(A) the facility is fundamentally different with respect to the factors (other than cost) specified in section 1314(b) or 1314(g) of this title and considered by the Administrator in establishing such national effluent limitation guidelines or categorical pretreatment standards;

(B) the application—

(i) is based solely on information and supporting data submitted to the Administrator during the rulemaking for establishment of the applicable national effluent limitation guidelines or categorical pretreatment standard specifically raising the factors that are fundamentally different for such facility; or

(ii) is based on information and supporting data referred to in clause (i) and information and supporting data the applicant did not have a reasonable opportunity to submit during such rulemaking;

(C) the alternative requirement is no less stringent than justified by the fundamental difference; and

(D) the alternative requirement will not result in a non-water quality environmental impact which is markedly more adverse than the impact considered by the Administrator in establishing such national effluent limitation guideline or categorical pretreatment standard.

(2) Time limit for applications

An application for an alternative requirement which modifies the requirements of an effluent limitation or pretreatment standard under this subsection must be submitted to the Administrator within 180 days after the date on which such limitation or standard is established or revised, as the case may be.

(3) Time limit for decision

The Administrator shall approve or deny by final agency action an application submitted under this subsection within 180 days after the date such application is filed with the Administrator.

(4) Submission of information

The Administrator may allow an applicant under this subsection to submit information and supporting data until the earlier of the date the application is approved or denied or the last day that the Administrator has to approve or deny such application.

(5) Treatment of pending applications

For the purposes of this subsection, an application for an alternative requirement based on fundamentally different factors which is pending on February 4, 1987, shall be treated as having been submitted to the Administrator on the 180th day following February 4, 1987. The applicant may amend the application to take into account the provisions of this subsection.

(6) Effect of submission of application

An application for an alternative requirement under this subsection shall not stay the applicant's obligation to comply with the effluent limitation guideline or categorical pretreatment standard which is the subject of the application.

(7) Effect of denial

If an application for an alternative requirement which modifies the requirements of an effluent limitation or pretreatment standard under this subsection is denied by the Administrator, the applicant must comply with such limitation or standard as established or revised, as the case may be.

(8) Reports

By January 1, 1997, and January 1 of every odd-numbered year thereafter, the Administrator shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report on the status of applications for alternative requirements which modify the requirements of effluent limitations under section 1311 or 1314 of this title or any national categorical pretreatment standard under section 1317(b) of this title filed before, on, or after February 4, 1987.

(o) Application fees

The Administrator shall prescribe and collect from each applicant fees reflecting the reasonable administrative costs incurred in reviewing and processing applications for modifications submitted to the Administrator pursuant to sub-

sections (c), (g), (i), (k), (m), and (n) of this section, section 1314(d)(4) of this title, and section 1326(a) of this title. All amounts collected by the Administrator under this subsection shall be deposited into a special fund of the Treasury entitled “Water Permits and Related Services” which shall thereafter be available for appropriation to carry out activities of the Environmental Protection Agency for which such fees were collected.

(p) Modified permit for coal remining operations

(1) In general

Subject to paragraphs (2) through (4) of this subsection, the Administrator, or the State in any case which the State has an approved permit program under section 1342(b) of this title, may issue a permit under section 1342 of this title which modifies the requirements of subsection (b)(2)(A) of this section with respect to the pH level of any pre-existing discharge, and with respect to pre-existing discharges of iron and manganese from the remined area of any coal remining operation or with respect to the pH level or level of iron or manganese in any pre-existing discharge affected by the remining operation. Such modified requirements shall apply the best available technology economically achievable on a case-by-case basis, using best professional judgment, to set specific numerical effluent limitations in each permit.

(2) Limitations

The Administrator or the State may only issue a permit pursuant to paragraph (1) if the applicant demonstrates to the satisfaction of the Administrator or the State, as the case may be, that the coal remining operation will result in the potential for improved water quality from the remining operation but in no event shall such a permit allow the pH level of any discharge, and in no event shall such a permit allow the discharges of iron and manganese, to exceed the levels being discharged from the remined area before the coal remining operation begins. No discharge from, or affected by, the remining operation shall exceed State water quality standards established under section 1313 of this title.

(3) Definitions

For purposes of this subsection—

(A) Coal remining operation

The term “coal remining operation” means a coal mining operation which begins after February 4, 1987 at a site on which coal mining was conducted before August 3, 1977.

(B) Remined area

The term “remined area” means only that area of any coal remining operation on which coal mining was conducted before August 3, 1977.

(C) Pre-existing discharge

The term “pre-existing discharge” means any discharge at the time of permit application under this subsection.

(4) Applicability of strip mining laws

Nothing in this subsection shall affect the application of the Surface Mining Control and

Reclamation Act of 1977 [30 U.S.C. 1201 et seq.] to any coal remining operation, including the application of such Act to suspended solids.

(June 30, 1948, ch. 758, title III, §301, as added Pub. L. 92-500, §2, Oct. 18, 1972, 86 Stat. 844; amended Pub. L. 95-217, §§42-47, 53(c), Dec. 27, 1977, 91 Stat. 1582-1586, 1590; Pub. L. 97-117, §§21, 22(a)-(d), Dec. 29, 1981, 95 Stat. 1631, 1632; Pub. L. 97-440, Jan. 8, 1983, 96 Stat. 2289; Pub. L. 100-4, title III, §§301(a)-(e), 302(a)-(d), 303(a), (b)(1), (c)-(f), 304(a), 305, 306(a), (b), 307, Feb. 4, 1987, 101 Stat. 29-37; Pub. L. 100-688, title III, §3202(b), Nov. 18, 1988, 102 Stat. 4154; Pub. L. 103-431, §2, Oct. 31, 1994, 108 Stat. 4396; Pub. L. 104-66, title II, §2021(b), Dec. 21, 1995, 109 Stat. 727.)

REFERENCES IN TEXT

The Surface Mining Control and Reclamation Act of 1977, referred to in subsec. (p)(4), is Pub. L. 95-87, Aug. 3, 1977, 91 Stat. 445, as amended, which is classified generally to chapter 25 (§1201 et seq.) of Title 30, Mineral Lands and Mining. For complete classification of this Act to the Code, see Short Title note set out under section 1201 of Title 30 and Tables.

AMENDMENTS

1995—Subsec. (n)(8). Pub. L. 104-66 substituted “By January 1, 1997, and January 1 of every odd-numbered year thereafter, the Administrator shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure” for “Every 6 months after February 4, 1987, the Administrator shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Public Works and Transportation”.

1994—Subsec. (j)(1)(A). Pub. L. 103-431, §2(1), inserted before semicolon at end “, and except as provided in paragraph (5)”.

Subsec. (j)(5). Pub. L. 103-431, §2(2), added par. (5).

1988—Subsec. (f). Pub. L. 100-688 substituted “, any high-level radioactive waste, or any medical waste,” for “or high-level radioactive waste”.

1987—Subsec. (b)(2)(C). Pub. L. 100-4, §301(a), struck out “not later than July 1, 1984,” before “with respect” and inserted “as expeditiously as practicable but in no case later than three years after the date such limitations are promulgated under section 1314(b) of this title, and in no case later than March 31, 1989” after “of this paragraph”.

Subsec. (b)(2)(D). Pub. L. 100-4, §301(b), substituted “as expeditiously as practicable, but in no case later than three years after the date such limitations are promulgated under section 1314(b) of this title, and in no case later than March 31, 1989” for “not later than three years after the date such limitations are established”.

Subsec. (b)(2)(E). Pub. L. 100-4, §301(c), substituted “as expeditiously as practicable but in no case later than three years after the date such limitations are promulgated under section 1314(b) of this title, and in no case later than March 31, 1989, compliance with” for “not later than July 1, 1984,”.

Subsec. (b)(2)(F). Pub. L. 100-4, §301(d), substituted “as expeditiously as practicable but in no case” for “not” and “and in no case later than March 31, 1989” for “or not later than July 1, 1984, whichever is later, but in no case later than July 1, 1987”.

Subsec. (b)(3). Pub. L. 100-4, §301(e), added par. (3).

Subsec. (g)(1). Pub. L. 100-4, §302(a), substituted par. (1) for introductory provisions of former par. (1) which read as follows: “The Administrator, with the concurrence of the State, shall modify the requirements of subsection (b)(2)(A) of this section with respect to the discharge of any pollutant (other than pollutants identified pursuant to section 1314(a)(4) of this title, toxic pollutants subject to section 1317(a) of this title, and the thermal component of discharges) from any point

tained (including attainment of the objective of this chapter) from achieving such limitation.

(B) Reasonable progress

The Administrator, with the concurrence of the State, may issue a permit which modifies the effluent limitations required by subsection (a) of this section for toxic pollutants for a single period not to exceed 5 years if the applicant demonstrates to the satisfaction of the Administrator that such modified requirements (i) will represent the maximum degree of control within the economic capability of the owner and operator of the source, and (ii) will result in reasonable further progress beyond the requirements of section 1311(b)(2) of this title toward the requirements of subsection (a) of this section.

(c) Delay in application of other limitations

The establishment of effluent limitations under this section shall not operate to delay the application of any effluent limitation established under section 1311 of this title.

(June 30, 1948, ch. 758, title III, §302, as added Pub. L. 92-500, §2, Oct. 18, 1972, 86 Stat. 846; amended Pub. L. 100-4, title III, §308(e), Feb. 4, 1987, 101 Stat. 39.)

AMENDMENTS

1987—Subsec. (a). Pub. L. 100-4, §308(e)(2), inserted “or as identified under section 1314(l) of this title” after “Administrator” and “public health,” after “protection of”.

Subsec. (b). Pub. L. 100-4, §308(e)(1), amended subsec. (b) generally. Prior to amendment, subsec. (b) read as follows:

“(1) Prior to establishment of any effluent limitation pursuant to subsection (a) of this section, the Administrator shall issue notice of intent to establish such limitation and within ninety days of such notice hold a public hearing to determine the relationship of the economic and social costs of achieving any such limitation or limitations, including any economic or social dislocation in the affected community or communities, to the social and economic benefits to be obtained (including the attainment of the objective of this chapter) and to determine whether or not such effluent limitations can be implemented with available technology or other alternative control strategies.

“(2) If a person affected by such limitation demonstrates at such hearing that (whether or not such technology or other alternative control strategies are available) there is no reasonable relationship between the economic and social costs and the benefits to be obtained (including attainment of the objective of this chapter), such limitation shall not become effective and the Administrator shall adjust such limitation as it applies to such person.”

§ 1313. Water quality standards and implementation plans

(a) Existing water quality standards

(1) In order to carry out the purpose of this chapter, any water quality standard applicable to interstate waters which was adopted by any State and submitted to, and approved by, or is awaiting approval by, the Administrator pursuant to this Act as in effect immediately prior to October 18, 1972, shall remain in effect unless the Administrator determined that such standard is not consistent with the applicable requirements

of this Act as in effect immediately prior to October 18, 1972. If the Administrator makes such a determination he shall, within three months after October 18, 1972, notify the State and specify the changes needed to meet such requirements. If such changes are not adopted by the State within ninety days after the date of such notification, the Administrator shall promulgate such changes in accordance with subsection (b) of this section.

(2) Any State which, before October 18, 1972, has adopted, pursuant to its own law, water quality standards applicable to intrastate waters shall submit such standards to the Administrator within thirty days after October 18, 1972. Each such standard shall remain in effect, in the same manner and to the same extent as any other water quality standard established under this chapter unless the Administrator determines that such standard is inconsistent with the applicable requirements of this Act as in effect immediately prior to October 18, 1972. If the Administrator makes such a determination he shall not later than the one hundred and twentieth day after the date of submission of such standards, notify the State and specify the changes needed to meet such requirements. If such changes are not adopted by the State within ninety days after such notification, the Administrator shall promulgate such changes in accordance with subsection (b) of this section.

(3)(A) Any State which prior to October 18, 1972, has not adopted pursuant to its own laws water quality standards applicable to intrastate waters shall, not later than one hundred and eighty days after October 18, 1972, adopt and submit such standards to the Administrator.

(B) If the Administrator determines that any such standards are consistent with the applicable requirements of this Act as in effect immediately prior to October 18, 1972, he shall approve such standards.

(C) If the Administrator determines that any such standards are not consistent with the applicable requirements of this Act as in effect immediately prior to October 18, 1972, he shall, not later than the ninetieth day after the date of submission of such standards, notify the State and specify the changes to meet such requirements. If such changes are not adopted by the State within ninety days after the date of notification, the Administrator shall promulgate such standards pursuant to subsection (b) of this section.

(b) Proposed regulations

(1) The Administrator shall promptly prepare and publish proposed regulations setting forth water quality standards for a State in accordance with the applicable requirements of this Act as in effect immediately prior to October 18, 1972, if—

(A) the State fails to submit water quality standards within the times prescribed in subsection (a) of this section.

(B) a water quality standard submitted by such State under subsection (a) of this section is determined by the Administrator not to be consistent with the applicable requirements of subsection (a) of this section.

(2) The Administrator shall promulgate any water quality standard published in a proposed

regulation not later than one hundred and ninety days after the date he publishes any such proposed standard, unless prior to such promulgation, such State has adopted a water quality standard which the Administrator determines to be in accordance with subsection (a) of this section.

(c) Review; revised standards; publication

(1) The Governor of a State or the State water pollution control agency of such State shall from time to time (but at least once each three year period beginning with October 18, 1972) hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards. Results of such review shall be made available to the Administrator.

(2)(A) Whenever the State revises or adopts a new standard, such revised or new standard shall be submitted to the Administrator. Such revised or new water quality standard shall consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses. Such standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this chapter. Such standards shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation.

(B) Whenever a State reviews water quality standards pursuant to paragraph (1) of this subsection, or revises or adopts new standards pursuant to this paragraph, such State shall adopt criteria for all toxic pollutants listed pursuant to section 1317(a)(1) of this title for which criteria have been published under section 1314(a) of this title, the discharge or presence of which in the affected waters could reasonably be expected to interfere with those designated uses adopted by the State, as necessary to support such designated uses. Such criteria shall be specific numerical criteria for such toxic pollutants. Where such numerical criteria are not available, whenever a State reviews water quality standards pursuant to paragraph (1), or revises or adopts new standards pursuant to this paragraph, such State shall adopt criteria based on biological monitoring or assessment methods consistent with information published pursuant to section 1314(a)(8) of this title. Nothing in this section shall be construed to limit or delay the use of effluent limitations or other permit conditions based on or involving biological monitoring or assessment methods or previously adopted numerical criteria.

(3) If the Administrator, within sixty days after the date of submission of the revised or new standard, determines that such standard meets the requirements of this chapter, such standard shall thereafter be the water quality standard for the applicable waters of that State. If the Administrator determines that any such revised or new standard is not consistent with the applicable requirements of this chapter, he shall not later than the ninetieth day after the date of submission of such standard notify the

State and specify the changes to meet such requirements. If such changes are not adopted by the State within ninety days after the date of notification, the Administrator shall promulgate such standard pursuant to paragraph (4) of this subsection.

(4) The Administrator shall promptly prepare and publish proposed regulations setting forth a revised or new water quality standard for the navigable waters involved—

(A) if a revised or new water quality standard submitted by such State under paragraph (3) of this subsection for such waters is determined by the Administrator not to be consistent with the applicable requirements of this chapter, or

(B) in any case where the Administrator determines that a revised or new standard is necessary to meet the requirements of this chapter.

The Administrator shall promulgate any revised or new standard under this paragraph not later than ninety days after he publishes such proposed standards, unless prior to such promulgation, such State has adopted a revised or new water quality standard which the Administrator determines to be in accordance with this chapter.

(d) Identification of areas with insufficient controls; maximum daily load; certain effluent limitations revision

(1)(A) Each State shall identify those waters within its boundaries for which the effluent limitations required by section 1311(b)(1)(A) and section 1311(b)(1)(B) of this title are not stringent enough to implement any water quality standard applicable to such waters. The State shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters.

(B) Each State shall identify those waters or parts thereof within its boundaries for which controls on thermal discharges under section 1311 of this title are not stringent enough to assure protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife.

(C) Each State shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, 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.

(D) Each State shall estimate for the waters identified in paragraph (1)(B) of this subsection the total maximum daily thermal load required to assure protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife. Such estimates shall take into account the normal water temperatures, flow rates, seasonal variations, existing sources of heat input, and the dissipative capacity of the identified waters or parts thereof. Such esti-

mates shall include a calculation of the maximum heat input that can be made into each such part and shall include a margin of safety which takes into account any lack of knowledge concerning the development of thermal water quality criteria for such protection and propagation in the identified waters or parts thereof.

(2) Each State shall submit to the Administrator from time to time, with the first such submission not later than one hundred and eighty days after the date of publication of the first identification of pollutants under section 1314(a)(2)(D) of this title, for his approval the waters identified and the loads established under paragraphs (1)(A), (1)(B), (1)(C), and (1)(D) of this subsection. The Administrator shall either approve or disapprove such identification and load not later than thirty days after the date of submission. If the Administrator approves such identification and load, such State shall incorporate them into its current plan under subsection (e) of this section. If the Administrator disapproves such identification and load, he shall not later than thirty days after the date of such disapproval identify such waters in such State and establish such loads for such waters as he determines necessary to implement the water quality standards applicable to such waters and upon such identification and establishment the State shall incorporate them into its current plan under subsection (e) of this section.

(3) For the specific purpose of developing information, each State shall identify all waters within its boundaries which it has not identified under paragraph (1)(A) and (1)(B) of this subsection and estimate for such waters the total maximum daily load with seasonal variations and margins of safety, for those pollutants which the Administrator identifies under section 1314(a)(2) of this title as suitable for such calculation and for thermal discharges, at a level that would assure protection and propagation of a balanced indigenous population of fish, shellfish, and wildlife.

(4) LIMITATIONS ON REVISION OF CERTAIN EFFLUENT LIMITATIONS.—

(A) STANDARD NOT ATTAINED.—For waters identified under paragraph (1)(A) where the applicable water quality standard has not yet been attained, any effluent limitation based on a total maximum daily load or other waste load allocation established under this section may be revised only if (i) the cumulative effect of all such revised effluent limitations based on such total maximum daily load or waste load allocation will assure the attainment of such water quality standard, or (ii) the designated use which is not being attained is removed in accordance with regulations established under this section.

(B) STANDARD ATTAINED.—For waters identified under paragraph (1)(A) where the quality of such waters equals or exceeds levels necessary to protect the designated use for such waters or otherwise required by applicable water quality standards, any effluent limitation based on a total maximum daily load or other waste load allocation established under this section, or any water quality standard established under this section, or any other per-

mitting standard may be revised only if such revision is subject to and consistent with the antidegradation policy established under this section.

(e) Continuing planning process

(1) Each State shall have a continuing planning process approved under paragraph (2) of this subsection which is consistent with this chapter.

(2) Each State shall submit not later than 120 days after October 18, 1972, to the Administrator for his approval a proposed continuing planning process which is consistent with this chapter. Not later than thirty days after the date of submission of such a process the Administrator shall either approve or disapprove such process. The Administrator shall from time to time review each State's approved planning process for the purpose of insuring that such planning process is at all times consistent with this chapter. The Administrator shall not approve any State permit program under subchapter IV of this chapter for any State which does not have an approved continuing planning process under this section.

(3) The Administrator shall approve any continuing planning process submitted to him under this section which will result in plans for all navigable waters within such State, which include, but are not limited to, the following:

(A) effluent limitations and schedules of compliance at least as stringent as those required by section 1311(b)(1), section 1311(b)(2), section 1316, and section 1317 of this title, and at least as stringent as any requirements contained in any applicable water quality standard in effect under authority of this section;

(B) the incorporation of all elements of any applicable area-wide waste management plans under section 1288 of this title, and applicable basin plans under section 1289 of this title;

(C) total maximum daily load for pollutants in accordance with subsection (d) of this section;

(D) procedures for revision;

(E) adequate authority for intergovernmental cooperation;

(F) adequate implementation, including schedules of compliance, for revised or new water quality standards, under subsection (c) of this section;

(G) controls over the disposition of all residual waste from any water treatment processing;

(H) an inventory and ranking, in order of priority, of needs for construction of waste treatment works required to meet the applicable requirements of sections 1311 and 1312 of this title.

(f) Earlier compliance

Nothing in this section shall be construed to affect any effluent limitation, or schedule of compliance required by any State to be implemented prior to the dates set forth in sections 1311(b)(1) and 1311(b)(2) of this title nor to preclude any State from requiring compliance with any effluent limitation or schedule of compliance at dates earlier than such dates.

(g) Heat standards

Water quality standards relating to heat shall be consistent with the requirements of section 1326 of this title.

(h) Thermal water quality standards

For the purposes of this chapter the term “water quality standards” includes thermal water quality standards.

(i) Coastal recreation water quality criteria**(1) Adoption by States****(A) Initial criteria and standards**

Not later than 42 months after October 10, 2000, each State having coastal recreation waters shall adopt and submit to the Administrator water quality criteria and standards for the coastal recreation waters of the State for those pathogens and pathogen indicators for which the Administrator has published criteria under section 1314(a) of this title.

(B) New or revised criteria and standards

Not later than 36 months after the date of publication by the Administrator of new or revised water quality criteria under section 1314(a)(9) of this title, each State having coastal recreation waters shall adopt and submit to the Administrator new or revised water quality standards for the coastal recreation waters of the State for all pathogens and pathogen indicators to which the new or revised water quality criteria are applicable.

(2) Failure of States to adopt**(A) In general**

If a State fails to adopt water quality criteria and standards in accordance with paragraph (1)(A) that are as protective of human health as the criteria for pathogens and pathogen indicators for coastal recreation waters published by the Administrator, the Administrator shall promptly propose regulations for the State setting forth revised or new water quality standards for pathogens and pathogen indicators described in paragraph (1)(A) for coastal recreation waters of the State.

(B) Exception

If the Administrator proposes regulations for a State described in subparagraph (A) under subsection (c)(4)(B) of this section, the Administrator shall publish any revised or new standard under this subsection not later than 42 months after October 10, 2000.

(3) Applicability

Except as expressly provided by this subsection, the requirements and procedures of subsection (c) of this section apply to this subsection, including the requirement in subsection (c)(2)(A) of this section that the criteria protect public health and welfare.

(June 30, 1948, ch. 758, title III, §303, as added Pub. L. 92-500, §2, Oct. 18, 1972, 86 Stat. 846; amended Pub. L. 100-4, title III, §308(d), title IV, §404(b), Feb. 4, 1987, 101 Stat. 39, 68; Pub. L. 106-284, §2, Oct. 10, 2000, 114 Stat. 870.)

REFERENCES IN TEXT

This Act, referred to in subsecs. (a)(1), (2), (3)(B), (C) and (b)(1), means act June 30, 1948, ch. 758, 62 Stat. 1155, prior to the supersedure and reenactment of act June 30, 1948 by act Oct. 18, 1972, Pub. L. 92-500, 86 Stat. 816. Act June 30, 1948, ch. 758, as added by act Oct. 18, 1972, Pub. L. 92-500, 86 Stat. 816, enacted this chapter.

AMENDMENTS

2000—Subsec. (i). Pub. L. 106-284 added subsec. (i).
1987—Subsec. (c)(2). Pub. L. 100-4, §308(d), designated existing provision as subpar. (A) and added subpar. (B).
Subsec. (d)(4). Pub. L. 100-4, §404(b), added par. (4).

§ 1313a. Revised water quality standards

The review, revision, and adoption or promulgation of revised or new water quality standards pursuant to section 303(c) of the Federal Water Pollution Control Act [33 U.S.C. 1313(c)] shall be completed by the date three years after December 29, 1981. No grant shall be made under title II of the Federal Water Pollution Control Act [33 U.S.C. 1281 et seq.] after such date until water quality standards are reviewed and revised pursuant to section 303(c), except where the State has in good faith submitted such revised water quality standards and the Administrator has not acted to approve or disapprove such submission within one hundred and twenty days of receipt.

(Pub. L. 97-117, §24, Dec. 29, 1981, 95 Stat. 1632.)

REFERENCES IN TEXT

The Federal Water Pollution Control Act, referred to in text, is act June 30, 1948, ch. 758, as amended generally by Pub. L. 92-500, §2, Oct. 18, 1972, 86 Stat. 816. Title II of the Act is classified generally to subchapter II (§1281 et seq.) of this chapter. For complete classification of this Act to the Code, see Short Title note set out under section 1251 of this title and Tables.

CODIFICATION

Section was enacted as part of the Municipal Wastewater Treatment Construction Grant Amendments of 1981, and not as part of the Federal Water Pollution Control Act which comprises this chapter.

§ 1314. Information and guidelines**(a) Criteria development and publication**

(1) The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall develop and publish, within one year after October 18, 1972 (and from time to time thereafter revise) criteria for water quality accurately reflecting the latest scientific knowledge (A) on the kind and extent of all identifiable effects on health and welfare including, but not limited to, plankton, fish, shellfish, wildlife, plant life, shorelines, beaches, esthetics, and recreation which may be expected from the presence of pollutants in any body of water, including ground water; (B) on the concentration and dispersal of pollutants, or their byproducts, through biological, physical, and chemical processes; and (C) on the effects of pollutants on biological community diversity, productivity, and stability, including information on the factors affecting rates of eutrophication and rates of organic and inorganic sedimentation for varying types of receiving waters.

(2) The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall develop and pub-

(taking into account the interaction of such thermal component with other pollutants), that will assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on that body of water.

(b) Cooling water intake structures

Any standard established pursuant to section 1311 of this title or section 1316 of this title and applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact.

(c) Period of protection from more stringent effluent limitations following discharge point source modification commenced after October 18, 1972

Notwithstanding any other provision of this chapter, any point source of a discharge having a thermal component, the modification of which point source is commenced after October 18, 1972, and which, as modified, meets effluent limitations established under section 1311 of this title or, if more stringent, effluent limitations established under section 1313 of this title and which effluent limitations will assure protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in or on the water into which the discharge is made, shall not be subject to any more stringent effluent limitation with respect to the thermal component of its discharge during a ten year period beginning on the date of completion of such modification or during the period of depreciation or amortization of such facility for the purpose of section 167 or 169 (or both) of title 26, whichever period ends first.

(June 30, 1948, ch. 758, title III, §316, as added Pub. L. 92-500, §2, Oct. 18, 1972, 86 Stat. 876; amended Pub. L. 99-514, §2, Oct. 22, 1986, 100 Stat. 2095.)

AMENDMENTS

1986—Subsec. (c). Pub. L. 99-514 substituted “Internal Revenue Code of 1986” for “Internal Revenue Code of 1954”, which for purposes of codification was translated as “title 26” thus requiring no change in text.

§ 1327. Omitted

CODIFICATION

Section, act June 30, 1948, ch. 758, title III, §317, as added Oct. 18, 1972, Pub. L. 92-500, §2, 86 Stat. 877, authorized Administrator to investigate and study feasibility of alternate methods of financing cost of preventing, controlling, and abating pollution as directed by Water Quality Improvement Act of 1970 and to report to Congress, not later than two years after Oct. 18, 1972, the results of investigation and study accompanied by recommendations for financing these programs for fiscal years beginning after 1976.

§ 1328. Aquaculture

(a) Authority to permit discharge of specific pollutants

The Administrator is authorized, after public hearings, to permit the discharge of a specific pollutant or pollutants under controlled conditions associated with an approved aquaculture project under Federal or State supervision pursuant to section 1342 of this title.

(b) Procedures and guidelines

The Administrator shall by regulation establish any procedures and guidelines which the Administrator deems necessary to carry out this section. Such regulations shall require the application to such discharge of each criterion, factor, procedure, and requirement applicable to a permit issued under section 1342 of this title, as the Administrator determines necessary to carry out the objective of this chapter.

(c) State administration

Each State desiring to administer its own permit program within its jurisdiction for discharge of a specific pollutant or pollutants under controlled conditions associated with an approved aquaculture project may do so if upon submission of such program the Administrator determines such program is adequate to carry out the objective of this chapter.

(June 30, 1948, ch. 758, title III, §318, as added Pub. L. 92-500, §2, Oct. 18, 1972, 86 Stat. 877; amended Pub. L. 95-217, §63, Dec. 27, 1977, 91 Stat. 1599.)

AMENDMENTS

1977—Subsec. (a). Pub. L. 95-217 inserted “pursuant to section 1342 of this title” after “Federal or State supervision”.

Subsec. (b). Pub. L. 95-217 struck out “, not later than January 1, 1974,” after “The Administrator shall by regulation” in existing provisions and inserted provisions that the regulations require the application to the discharge of each criterion, factor, procedure, and requirement applicable to a permit issued under section 1342 of this title, as the Administrator determines necessary to carry out the objectives of this chapter.

Subsec. (c). Pub. L. 95-217 added subsec. (c).

§ 1329. Nonpoint source management programs

(a) State assessment reports

(1) Contents

The Governor of each State shall, after notice and opportunity for public comment, prepare and submit to the Administrator for approval, a report which—

(A) identifies those navigable waters within the State which, without additional action to control nonpoint sources of pollution, cannot reasonably be expected to attain or maintain applicable water quality standards or the goals and requirements of this chapter;

(B) identifies those categories and subcategories of nonpoint sources or, where appropriate, particular nonpoint sources which add significant pollution to each portion of the navigable waters identified under subparagraph (A) in amounts which contribute to such portion not meeting such water quality standards or such goals and requirements;

(C) describes the process, including intergovernmental coordination and public participation, for identifying best management practices and measures to control each category and subcategory of nonpoint sources and, where appropriate, particular nonpoint sources identified under subparagraph (B) and to reduce, to the maximum extent practicable, the level of pollution resulting from such category, subcategory, or source; and

(D) identifies and describes State and local programs for controlling pollution added from nonpoint sources to, and improving the quality of, each such portion of the navigable waters, including but not limited to those programs which are receiving Federal assistance under subsections (h) and (i) of this section.

(2) Information used in preparation

In developing the report required by this section, the State (A) may rely upon information developed pursuant to sections 1288, 1313(e), 1314(f), 1315(b), and 1324 of this title, and other information as appropriate, and (B) may utilize appropriate elements of the waste treatment management plans developed pursuant to sections 1288(b) and 1313 of this title, to the extent such elements are consistent with and fulfill the requirements of this section.

(b) State management programs

(1) In general

The Governor of each State, for that State or in combination with adjacent States, shall, after notice and opportunity for public comment, prepare and submit to the Administrator for approval a management program which such State proposes to implement in the first four fiscal years beginning after the date of submission of such management program for controlling pollution added from nonpoint sources to the navigable waters within the State and improving the quality of such waters.

(2) Specific contents

Each management program proposed for implementation under this subsection shall include each of the following:

(A) An identification of the best management practices and measures which will be undertaken to reduce pollutant loadings resulting from each category, subcategory, or particular nonpoint source designated under paragraph (1)(B), taking into account the impact of the practice on ground water quality.

(B) An identification of programs (including, as appropriate, nonregulatory or regulatory programs for enforcement, technical assistance, financial assistance, education, training, technology transfer, and demonstration projects) to achieve implementation of the best management practices by the categories, subcategories, and particular nonpoint sources designated under subparagraph (A).

(C) A schedule containing annual milestones for (i) utilization of the program implementation methods identified in subparagraph (B), and (ii) implementation of the best management practices identified in subparagraph (A) by the categories, subcategories, or particular nonpoint sources designated under paragraph (1)(B). Such schedule shall provide for utilization of the best management practices at the earliest practicable date.

(D) A certification of the attorney general of the State or States (or the chief attorney of any State water pollution control agency

which has independent legal counsel) that the laws of the State or States, as the case may be, provide adequate authority to implement such management program or, if there is not such adequate authority, a list of such additional authorities as will be necessary to implement such management program. A schedule and commitment by the State or States to seek such additional authorities as expeditiously as practicable.

(E) Sources of Federal and other assistance and funding (other than assistance provided under subsections (h) and (i) of this section) which will be available in each of such fiscal years for supporting implementation of such practices and measures and the purposes for which such assistance will be used in each of such fiscal years.

(F) An identification of Federal financial assistance programs and Federal development projects for which the State will review individual assistance applications or development projects for their effect on water quality pursuant to the procedures set forth in Executive Order 12372 as in effect on September 17, 1983, to determine whether such assistance applications or development projects would be consistent with the program prepared under this subsection; for the purposes of this subparagraph, identification shall not be limited to the assistance programs or development projects subject to Executive Order 12372 but may include any programs listed in the most recent Catalog of Federal Domestic Assistance which may have an effect on the purposes and objectives of the State's nonpoint source pollution management program.

(3) Utilization of local and private experts

In developing and implementing a management program under this subsection, a State shall, to the maximum extent practicable, involve local public and private agencies and organizations which have expertise in control of nonpoint sources of pollution.

(4) Development on watershed basis

A State shall, to the maximum extent practicable, develop and implement a management program under this subsection on a watershed-by-watershed basis within such State.

(c) Administrative provisions

(1) Cooperation requirement

Any report required by subsection (a) of this section and any management program and report required by subsection (b) of this section shall be developed in cooperation with local, substate regional, and interstate entities which are actively planning for the implementation of nonpoint source pollution controls and have either been certified by the Administrator in accordance with section 1288 of this title, have worked jointly with the State on water quality management planning under section 1285(j) of this title, or have been designated by the State legislative body or Governor as water quality management planning agencies for their geographic areas.

(2) Time period for submission of reports and management programs

Each report and management program shall be submitted to the Administrator during the 18-month period beginning on February 4, 1987.

(d) Approval or disapproval of reports and management programs**(1) Deadline**

Subject to paragraph (2), not later than 180 days after the date of submission to the Administrator of any report or management program under this section (other than subsections (h), (i), and (k) of this section), the Administrator shall either approve or disapprove such report or management program, as the case may be. The Administrator may approve a portion of a management program under this subsection. If the Administrator does not disapprove a report, management program, or portion of a management program in such 180-day period, such report, management program, or portion shall be deemed approved for purposes of this section.

(2) Procedure for disapproval

If, after notice and opportunity for public comment and consultation with appropriate Federal and State agencies and other interested persons, the Administrator determines that—

(A) the proposed management program or any portion thereof does not meet the requirements of subsection (b)(2) of this section or is not likely to satisfy, in whole or in part, the goals and requirements of this chapter;

(B) adequate authority does not exist, or adequate resources are not available, to implement such program or portion;

(C) the schedule for implementing such program or portion is not sufficiently expeditious; or

(D) the practices and measures proposed in such program or portion are not adequate to reduce the level of pollution in navigable waters in the State resulting from nonpoint sources and to improve the quality of navigable waters in the State;

the Administrator shall within 6 months of the receipt of the proposed program notify the State of any revisions or modifications necessary to obtain approval. The State shall thereupon have an additional 3 months to submit its revised management program and the Administrator shall approve or disapprove such revised program within three months of receipt.

(3) Failure of State to submit report

If a Governor of a State does not submit the report required by subsection (a) of this section within the period specified by subsection (c)(2) of this section, the Administrator shall, within 30 months after February 4, 1987, prepare a report for such State which makes the identifications required by paragraphs (1)(A) and (1)(B) of subsection (a) of this section. Upon completion of the requirement of the preceding sentence and after notice and opportunity for comment, the Administrator shall

report to Congress on his actions pursuant to this section.

(e) Local management programs; technical assistance

If a State fails to submit a management program under subsection (b) of this section or the Administrator does not approve such a management program, a local public agency or organization which has expertise in, and authority to, control water pollution resulting from nonpoint sources in any area of such State which the Administrator determines is of sufficient geographic size may, with approval of such State, request the Administrator to provide, and the Administrator shall provide, technical assistance to such agency or organization in developing for such area a management program which is described in subsection (b) of this section and can be approved pursuant to subsection (d) of this section. After development of such management program, such agency or organization shall submit such management program to the Administrator for approval. If the Administrator approves such management program, such agency or organization shall be eligible to receive financial assistance under subsection (h) of this section for implementation of such management program as if such agency or organization were a State for which a report submitted under subsection (a) of this section and a management program submitted under subsection (b) of this section were approved under this section. Such financial assistance shall be subject to the same terms and conditions as assistance provided to a State under subsection (h) of this section.

(f) Technical assistance for States

Upon request of a State, the Administrator may provide technical assistance to such State in developing a management program approved under subsection (b) of this section for those portions of the navigable waters requested by such State.

(g) Interstate management conference**(1) Convening of conference; notification; purpose**

If any portion of the navigable waters in any State which is implementing a management program approved under this section is not meeting applicable water quality standards or the goals and requirements of this chapter as a result, in whole or in part, of pollution from nonpoint sources in another State, such State may petition the Administrator to convene, and the Administrator shall convene, a management conference of all States which contribute significant pollution resulting from nonpoint sources to such portion. If, on the basis of information available, the Administrator determines that a State is not meeting applicable water quality standards or the goals and requirements of this chapter as a result, in whole or in part, of significant pollution from nonpoint sources in another State, the Administrator shall notify such States. The Administrator may convene a management conference under this paragraph not later than 180 days after giving such notification, whether or not the State which is not

meeting such standards requests such conference. The purpose of such conference shall be to develop an agreement among such States to reduce the level of pollution in such portion resulting from nonpoint sources and to improve the water quality of such portion. Nothing in such agreement shall supersede or abrogate rights to quantities of water which have been established by interstate water compacts, Supreme Court decrees, or State water laws. This subsection shall not apply to any pollution which is subject to the Colorado River Basin Salinity Control Act [43 U.S.C. 1571 et seq.]. The requirement that the Administrator convene a management conference shall not be subject to the provisions of section 1365 of this title.

(2) State management program requirement

To the extent that the States reach agreement through such conference, the management programs of the States which are parties to such agreements and which contribute significant pollution to the navigable waters or portions thereof not meeting applicable water quality standards or goals and requirements of this chapter will be revised to reflect such agreement. Such management programs shall be consistent with Federal and State law.

(h) Grant program

(1) Grants for implementation of management programs

Upon application of a State for which a report submitted under subsection (a) of this section and a management program submitted under subsection (b) of this section is approved under this section, the Administrator shall make grants, subject to such terms and conditions as the Administrator considers appropriate, under this subsection to such State for the purpose of assisting the State in implementing such management program. Funds reserved pursuant to section 1285(j)(5) of this title may be used to develop and implement such management program.

(2) Applications

An application for a grant under this subsection in any fiscal year shall be in such form and shall contain such other information as the Administrator may require, including an identification and description of the best management practices and measures which the State proposes to assist, encourage, or require in such year with the Federal assistance to be provided under the grant.

(3) Federal share

The Federal share of the cost of each management program implemented with Federal assistance under this subsection in any fiscal year shall not exceed 60 percent of the cost incurred by the State in implementing such management program and shall be made on condition that the non-Federal share is provided from non-Federal sources.

(4) Limitation on grant amounts

Notwithstanding any other provision of this subsection, not more than 15 percent of the amount appropriated to carry out this sub-

section may be used to make grants to any one State, including any grants to any local public agency or organization with authority to control pollution from nonpoint sources in any area of such State.

(5) Priority for effective mechanisms

For each fiscal year beginning after September 30, 1987, the Administrator may give priority in making grants under this subsection, and shall give consideration in determining the Federal share of any such grant, to States which have implemented or are proposing to implement management programs which will—

(A) control particularly difficult or serious nonpoint source pollution problems, including, but not limited to, problems resulting from mining activities;

(B) implement innovative methods or practices for controlling nonpoint sources of pollution, including regulatory programs where the Administrator deems appropriate;

(C) control interstate nonpoint source pollution problems; or

(D) carry out ground water quality protection activities which the Administrator determines are part of a comprehensive nonpoint source pollution control program, including research, planning, ground water assessments, demonstration programs, enforcement, technical assistance, education, and training to protect ground water quality from nonpoint sources of pollution.

(6) Availability for obligation

The funds granted to each State pursuant to this subsection in a fiscal year shall remain available for obligation by such State for the fiscal year for which appropriated. The amount of any such funds not obligated by the end of such fiscal year shall be available to the Administrator for granting to other States under this subsection in the next fiscal year.

(7) Limitation on use of funds

States may use funds from grants made pursuant to this section for financial assistance to persons only to the extent that such assistance is related to the costs of demonstration projects.

(8) Satisfactory progress

No grant may be made under this subsection in any fiscal year to a State which in the preceding fiscal year received a grant under this subsection unless the Administrator determines that such State made satisfactory progress in such preceding fiscal year in meeting the schedule specified by such State under subsection (b)(2) of this section.

(9) Maintenance of effort

No grant may be made to a State under this subsection in any fiscal year unless such State enters into such agreements with the Administrator as the Administrator may require to ensure that such State will maintain its aggregate expenditures from all other sources for programs for controlling pollution added to the navigable waters in such State from nonpoint sources and improving the quality of such waters at or above the average level of

such expenditures in its two fiscal years preceding February 4, 1987.

(10) Request for information

The Administrator may request such information, data, and reports as he considers necessary to make the determination of continuing eligibility for grants under this section.

(11) Reporting and other requirements

Each State shall report to the Administrator on an annual basis concerning (A) its progress in meeting the schedule of milestones submitted pursuant to subsection (b)(2)(C) of this section, and (B) to the extent that appropriate information is available, reductions in nonpoint source pollutant loading and improvements in water quality for those navigable waters or watersheds within the State which were identified pursuant to subsection (a)(1)(A) of this section resulting from implementation of the management program.

(12) Limitation on administrative costs

For purposes of this subsection, administrative costs in the form of salaries, overhead, or indirect costs for services provided and charged against activities and programs carried out with a grant under this subsection shall not exceed in any fiscal year 10 percent of the amount of the grant in such year, except that costs of implementing enforcement and regulatory activities, education, training, technical assistance, demonstration projects, and technology transfer programs shall not be subject to this limitation.

(i) Grants for protecting groundwater quality

(1) Eligible applicants and activities

Upon application of a State for which a report submitted under subsection (a) of this section and a plan submitted under subsection (b) of this section is approved under this section, the Administrator shall make grants under this subsection to such State for the purpose of assisting such State in carrying out groundwater quality protection activities which the Administrator determines will advance the State toward implementation of a comprehensive nonpoint source pollution control program. Such activities shall include, but not be limited to, research, planning, groundwater assessments, demonstration programs, enforcement, technical assistance, education and training to protect the quality of groundwater and to prevent contamination of groundwater from nonpoint sources of pollution.

(2) Applications

An application for a grant under this subsection shall be in such form and shall contain such information as the Administrator may require.

(3) Federal share; maximum amount

The Federal share of the cost of assisting a State in carrying out groundwater protection activities in any fiscal year under this subsection shall be 50 percent of the costs incurred by the State in carrying out such activities, except that the maximum amount of Federal assistance which any State may re-

ceive under this subsection in any fiscal year shall not exceed \$150,000.

(4) Report

The Administrator shall include in each report transmitted under subsection (m) of this section a report on the activities and programs implemented under this subsection during the preceding fiscal year.

(j) Authorization of appropriations

There is authorized to be appropriated to carry out subsections (h) and (i) of this section not to exceed \$70,000,000 for fiscal year 1988, \$100,000,000 per fiscal year for each of fiscal years 1989 and 1990, and \$130,000,000 for fiscal year 1991; except that for each of such fiscal years not to exceed \$7,500,000 may be made available to carry out subsection (i) of this section. Sums appropriated pursuant to this subsection shall remain available until expended.

(k) Consistency of other programs and projects with management programs

The Administrator shall transmit to the Office of Management and Budget and the appropriate Federal departments and agencies a list of those assistance programs and development projects identified by each State under subsection (b)(2)(F) of this section for which individual assistance applications and projects will be reviewed pursuant to the procedures set forth in Executive Order 12372 as in effect on September 17, 1983. Beginning not later than sixty days after receiving notification by the Administrator, each Federal department and agency shall modify existing regulations to allow States to review individual development projects and assistance applications under the identified Federal assistance programs and shall accommodate, according to the requirements and definitions of Executive Order 12372, as in effect on September 17, 1983, the concerns of the State regarding the consistency of such applications or projects with the State nonpoint source pollution management program.

(l) Collection of information

The Administrator shall collect and make available, through publications and other appropriate means, information pertaining to management practices and implementation methods, including, but not limited to, (1) information concerning the costs and relative efficiencies of best management practices for reducing nonpoint source pollution; and (2) available data concerning the relationship between water quality and implementation of various management practices to control nonpoint sources of pollution.

(m) Reports of Administrator

(1) Annual reports

Not later than January 1, 1988, and each January 1 thereafter, the Administrator shall transmit to the Committee on Public Works and Transportation of the House of Representatives and the Committee on Environment and Public Works of the Senate, a report for the preceding fiscal year on the activities and programs implemented under this section and the progress made in reducing pollution in the

navigable waters resulting from nonpoint sources and improving the quality of such waters.

(2) Final report

Not later than January 1, 1990, the Administrator shall transmit to Congress a final report on the activities carried out under this section. Such report, at a minimum, shall—

(A) describe the management programs being implemented by the States by types and amount of affected navigable waters, categories and subcategories of nonpoint sources, and types of best management practices being implemented;

(B) describe the experiences of the States in adhering to schedules and implementing best management practices;

(C) describe the amount and purpose of grants awarded pursuant to subsections (h) and (i) of this section;

(D) identify, to the extent that information is available, the progress made in reducing pollutant loads and improving water quality in the navigable waters;

(E) indicate what further actions need to be taken to attain and maintain in those navigable waters (i) applicable water quality standards, and (ii) the goals and requirements of this chapter;

(F) include recommendations of the Administrator concerning future programs (including enforcement programs) for controlling pollution from nonpoint sources; and

(G) identify the activities and programs of departments, agencies, and instrumentalities of the United States which are inconsistent with the management programs submitted by the States and recommend modifications so that such activities and programs are consistent with and assist the States in implementation of such management programs.

(n) Set aside for administrative personnel

Not less than 5 percent of the funds appropriated pursuant to subsection (j) of this section for any fiscal year shall be available to the Administrator to maintain personnel levels at the Environmental Protection Agency at levels which are adequate to carry out this section in such year.

(June 30, 1948, ch. 758, title III, §319, as added Pub. L. 100-4, title III, §316(a), Feb. 4, 1987, 101 Stat. 52; amended Pub. L. 105-362, title V, §501(c), Nov. 10, 1998, 112 Stat. 3283; Pub. L. 107-303, title III, §302(b)(1), Nov. 27, 2002, 116 Stat. 2361.)

REFERENCES IN TEXT

Executive Order 12372, referred to in subsecs. (b)(2)(F) and (k), is Ex. Ord. No. 12372, July 14, 1982, 47 F.R. 30959, as amended, which is set out under section 6506 of Title 31, Money and Finance.

The Colorado River Basin Salinity Control Act, referred to in subsec. (g)(1), is Pub. L. 93-320, June 24, 1974, 88 Stat. 266, as amended, which is classified principally to chapter 32A (§1571 et seq.) of Title 43, Public Lands. For complete classification of this Act to the Code, see Short Title note set out under section 1571 of Title 43 and Tables.

AMENDMENTS

2002—Subsecs. (i)(4), (m), (n). Pub. L. 107-303 repealed Pub. L. 105-362, §501(c). See 1998 Amendment note below.

1998—Subsec. (i)(4). Pub. L. 105-362, §501(c)(1), which directed the striking out of heading and text of par. (4), was repealed by Pub. L. 107-303. See Effective Date of 2002 Amendment note below.

Subsecs. (m), (n). Pub. L. 105-362, §501(c)(2), (3), which directed the redesignation of subsec. (n) as (m) and striking out of heading and text of former subsec. (m), was repealed by Pub. L. 107-303. See Effective Date of 2002 Amendment note below.

CHANGE OF NAME

Committee on Public Works and Transportation of House of Representatives treated as referring to Committee on Transportation and Infrastructure of House of Representatives by section 1(a) of Pub. L. 104-14, set out as a note preceding section 21 of Title 2, The Congress.

EFFECTIVE DATE OF 2002 AMENDMENT

Amendment by Pub. L. 107-303 effective Nov. 10, 1998, and Federal Water Pollution Act (33 U.S.C. 1251 et seq.) to be applied and administered on and after Nov. 27, 2002, as if amendments made by section 501(a)-(d) of Pub. L. 105-362 had not been enacted, see section 302(b) of Pub. L. 107-303, set out as a note under section 1254 of this title.

§ 1330. National estuary program

(a) Management conference

(1) Nomination of estuaries

The Governor of any State may nominate to the Administrator an estuary lying in whole or in part within the State as an estuary of national significance and request a management conference to develop a comprehensive management plan for the estuary. The nomination shall document the need for the conference, the likelihood of success, and information relating to the factors in paragraph (2).

(2) Convening of conference

(A) In general

In any case where the Administrator determines, on his own initiative or upon nomination of a State under paragraph (1), that the attainment or maintenance of that water quality in an estuary which assures protection of public water supplies and the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife, and allows recreational activities, in and on the water, requires the control of point and nonpoint sources of pollution to supplement existing controls of pollution in more than one State, the Administrator shall select such estuary and convene a management conference.

(B) Priority consideration

The Administrator shall give priority consideration under this section to Long Island Sound, New York and Connecticut; Narragansett Bay, Rhode Island; Buzzards Bay, Massachusetts; Massachusetts Bay, Massachusetts (including Cape Cod Bay and Boston Harbor); Puget Sound, Washington; New York-New Jersey Harbor, New York and New Jersey; Delaware Bay, Delaware and New

quality requirements such Federal agency may, after public hearing, suspend such license or permit. If such license or permit is suspended, it shall remain suspended until notification is received from the certifying State, agency, or Administrator, as the case may be, that there is reasonable assurance that such facility or activity will not violate the applicable provisions of section 1311, 1312, 1313, 1316, or 1317 of this title.

(5) Any Federal license or permit with respect to which a certification has been obtained under paragraph (1) of this subsection may be suspended or revoked by the Federal agency issuing such license or permit upon the entering of a judgment under this chapter that such facility or activity has been operated in violation of the applicable provisions of section 1311, 1312, 1313, 1316, or 1317 of this title.

(6) Except with respect to a permit issued under section 1342 of this title, in any case where actual construction of a facility has been lawfully commenced prior to April 3, 1970, no certification shall be required under this subsection for a license or permit issued after April 3, 1970, to operate such facility, except that any such license or permit issued without certification shall terminate April 3, 1973, unless prior to such termination date the person having such license or permit submits to the Federal agency which issued such license or permit a certification and otherwise meets the requirements of this section.

(b) Compliance with other provisions of law setting applicable water quality requirements

Nothing in this section shall be construed to limit the authority of any department or agency pursuant to any other provision of law to require compliance with any applicable water quality requirements. The Administrator shall, upon the request of any Federal department or agency, or State or interstate agency, or applicant, provide, for the purpose of this section, any relevant information on applicable effluent limitations, or other limitations, standards, regulations, or requirements, or water quality criteria, and shall, when requested by any such department or agency or State or interstate agency, or applicant, comment on any methods to comply with such limitations, standards, regulations, requirements, or criteria.

(c) Authority of Secretary of the Army to permit use of spoil disposal areas by Federal licensees or permittees

In order to implement the provisions of this section, the Secretary of the Army, acting through the Chief of Engineers, is authorized, if he deems it to be in the public interest, to permit the use of spoil disposal areas under his jurisdiction by Federal licensees or permittees, and to make an appropriate charge for such use. Moneys received from such licensees or permittees shall be deposited in the Treasury as miscellaneous receipts.

(d) Limitations and monitoring requirements of certification

Any certification provided under this section shall set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any applicant for a

Federal license or permit will comply with any applicable effluent limitations and other limitations, under section 1311 or 1312 of this title, standard of performance under section 1316 of this title, or prohibition, effluent standard, or pretreatment standard under section 1317 of this title, and with any other appropriate requirement of State law set forth in such certification, and shall become a condition on any Federal license or permit subject to the provisions of this section.

(June 30, 1948, ch. 758, title IV, § 401, as added Pub. L. 92-500, § 2, Oct. 18, 1972, 86 Stat. 877; amended Pub. L. 95-217, §§ 61(b), 64, Dec. 27, 1977, 91 Stat. 1598, 1599.)

AMENDMENTS

1977—Subsec. (a). Pub. L. 95-217 inserted reference to section 1313 of this title in pars. (1), (3), (4), and (5), struck out par. (6) which provided that no Federal agency be deemed an applicant for purposes of this subsection, and redesignated par. (7) as (6).

§ 1342. National pollutant discharge elimination system

(a) Permits for discharge of pollutants

(1) Except as provided in sections 1328 and 1344 of this title, the Administrator may, after opportunity for public hearing issue a permit for the discharge of any pollutant, or combination of pollutants, notwithstanding section 1311(a) of this title, upon condition that such discharge will meet either (A) all applicable requirements under sections 1311, 1312, 1316, 1317, 1318, and 1343 of this title, or (B) prior to the taking of necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of this chapter.

(2) The Administrator shall prescribe conditions for such permits to assure compliance with the requirements of paragraph (1) of this subsection, including conditions on data and information collection, reporting, and such other requirements as he deems appropriate.

(3) The permit program of the Administrator under paragraph (1) of this subsection, and permits issued thereunder, shall be subject to the same terms, conditions, and requirements as apply to a State permit program and permits issued thereunder under subsection (b) of this section.

(4) All permits for discharges into the navigable waters issued pursuant to section 407 of this title shall be deemed to be permits issued under this subchapter, and permits issued under this subchapter shall be deemed to be permits issued under section 407 of this title, and shall continue in force and effect for their term unless revoked, modified, or suspended in accordance with the provisions of this chapter.

(5) No permit for a discharge into the navigable waters shall be issued under section 407 of this title after October 18, 1972. Each application for a permit under section 407 of this title, pending on October 18, 1972, shall be deemed to be an application for a permit under this section. The Administrator shall authorize a State, which he determines has the capability of administering a permit program which will carry out the objec-

tives of this chapter to issue permits for discharges into the navigable waters within the jurisdiction of such State. The Administrator may exercise the authority granted him by the preceding sentence only during the period which begins on October 18, 1972, and ends either on the ninetieth day after the date of the first promulgation of guidelines required by section 1314(i)(2) of this title, or the date of approval by the Administrator of a permit program for such State under subsection (b) of this section, whichever date first occurs, and no such authorization to a State shall extend beyond the last day of such period. Each such permit shall be subject to such conditions as the Administrator determines are necessary to carry out the provisions of this chapter. No such permit shall issue if the Administrator objects to such issuance.

(b) State permit programs

At any time after the promulgation of the guidelines required by subsection (i)(2) of section 1314 of this title, the Governor of each State desiring to administer its own permit program for discharges into navigable waters within its jurisdiction may submit to the Administrator a full and complete description of the program it proposes to establish and administer under State law or under an interstate compact. In addition, such State shall submit a statement from the attorney general (or the attorney for those State water pollution control agencies which have independent legal counsel), or from the chief legal officer in the case of an interstate agency, that the laws of such State, or the interstate compact, as the case may be, provide adequate authority to carry out the described program. The Administrator shall approve each submitted program unless he determines that adequate authority does not exist:

(1) To issue permits which—

(A) apply, and insure compliance with, any applicable requirements of sections 1311, 1312, 1316, 1317, and 1343 of this title;

(B) are for fixed terms not exceeding five years; and

(C) can be terminated or modified for cause including, but not limited to, the following:

(i) violation of any condition of the permit;

(ii) obtaining a permit by misrepresentation, or failure to disclose fully all relevant facts;

(iii) change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

(D) control the disposal of pollutants into wells;

(2)(A) To issue permits which apply, and insure compliance with, all applicable requirements of section 1318 of this title; or

(B) To inspect, monitor, enter, and require reports to at least the same extent as required in section 1318 of this title;

(3) To insure that the public, and any other State the waters of which may be affected, receive notice of each application for a permit and to provide an opportunity for public hearing before a ruling on each such application;

(4) To insure that the Administrator receives notice of each application (including a copy thereof) for a permit;

(5) To insure that any State (other than the permitting State), whose waters may be affected by the issuance of a permit may submit written recommendations to the permitting State (and the Administrator) with respect to any permit application and, if any part of such written recommendations are not accepted by the permitting State, that the permitting State will notify such affected State (and the Administrator) in writing of its failure to so accept such recommendations together with its reasons for so doing;

(6) To insure that no permit will be issued if, in the judgment of the Secretary of the Army acting through the Chief of Engineers, after consultation with the Secretary of the department in which the Coast Guard is operating, anchorage and navigation of any of the navigable waters would be substantially impaired thereby;

(7) To abate violations of the permit or the permit program, including civil and criminal penalties and other ways and means of enforcement;

(8) To insure that any permit for a discharge from a publicly owned treatment works includes conditions to require the identification in terms of character and volume of pollutants of any significant source introducing pollutants subject to pretreatment standards under section 1317(b) of this title into such works and a program to assure compliance with such pretreatment standards by each such source, in addition to adequate notice to the permitting agency of (A) new introductions into such works of pollutants from any source which would be a new source as defined in section 1316 of this title if such source were discharging pollutants, (B) new introductions of pollutants into such works from a source which would be subject to section 1311 of this title if it were discharging such pollutants, or (C) a substantial change in volume or character of pollutants being introduced into such works by a source introducing pollutants into such works at the time of issuance of the permit. Such notice shall include information on the quality and quantity of effluent to be introduced into such treatment works and any anticipated impact of such change in the quantity or quality of effluent to be discharged from such publicly owned treatment works; and

(9) To insure that any industrial user of any publicly owned treatment works will comply with sections 1284(b), 1317, and 1318 of this title.

(c) Suspension of Federal program upon submission of State program; withdrawal of approval of State program; return of State program to Administrator

(1) Not later than ninety days after the date on which a State has submitted a program (or revision thereof) pursuant to subsection (b) of this section, the Administrator shall suspend the issuance of permits under subsection (a) of this section as to those discharges subject to such program unless he determines that the State permit program does not meet the requirements of subsection (b) of this section or does not conform to the guidelines issued under section 1314(i)(2) of this title. If the Administrator so determines, he shall notify the State of any revisions or modifications necessary to conform to such requirements or guidelines.

(2) Any State permit program under this section shall at all times be in accordance with this section and guidelines promulgated pursuant to section 1314(i)(2) of this title.

(3) Whenever the Administrator determines after public hearing that a State is not administering a program approved under this section in accordance with requirements of this section, he shall so notify the State and, if appropriate corrective action is not taken within a reasonable time, not to exceed ninety days, the Administrator shall withdraw approval of such program. The Administrator shall not withdraw approval of any such program unless he shall first have notified the State, and made public, in writing, the reasons for such withdrawal.

(4) LIMITATIONS ON PARTIAL PERMIT PROGRAM RETURNS AND WITHDRAWALS.—A State may return to the Administrator administration, and the Administrator may withdraw under paragraph (3) of this subsection approval, of—

(A) a State partial permit program approved under subsection (n)(3) of this section only if the entire permit program being administered by the State department or agency at the time is returned or withdrawn; and

(B) a State partial permit program approved under subsection (n)(4) of this section only if an entire phased component of the permit program being administered by the State at the time is returned or withdrawn.

(d) Notification of Administrator

(1) Each State shall transmit to the Administrator a copy of each permit application received by such State and provide notice to the Administrator of every action related to the consideration of such permit application, including each permit proposed to be issued by such State.

(2) No permit shall issue (A) if the Administrator within ninety days of the date of his notification under subsection (b)(5) of this section objects in writing to the issuance of such permit, or (B) if the Administrator within ninety days of the date of transmittal of the proposed permit by the State objects in writing to the issuance of such permit as being outside the guidelines and requirements of this chapter. Whenever the Administrator objects to the issuance of a permit under this paragraph such written objection shall contain a statement of the reasons for such objection and the effluent limitations and conditions which such permit would include if it were issued by the Administrator.

(3) The Administrator may, as to any permit application, waive paragraph (2) of this subsection.

(4) In any case where, after December 27, 1977, the Administrator, pursuant to paragraph (2) of this subsection, objects to the issuance of a permit, on request of the State, a public hearing shall be held by the Administrator on such objection. If the State does not resubmit such permit revised to meet such objection within 30 days after completion of the hearing, or, if no hearing is requested within 90 days after the date of such objection, the Administrator may issue the permit pursuant to subsection (a) of this section for such source in accordance with the guidelines and requirements of this chapter.

(e) Waiver of notification requirement

In accordance with guidelines promulgated pursuant to subsection (i)(2) of section 1314 of this title, the Administrator is authorized to waive the requirements of subsection (d) of this section at the time he approves a program pursuant to subsection (b) of this section for any category (including any class, type, or size within such category) of point sources within the State submitting such program.

(f) Point source categories

The Administrator shall promulgate regulations establishing categories of point sources which he determines shall not be subject to the requirements of subsection (d) of this section in any State with a program approved pursuant to subsection (b) of this section. The Administrator may distinguish among classes, types, and sizes within any category of point sources.

(g) Other regulations for safe transportation, handling, carriage, storage, and stowage of pollutants

Any permit issued under this section for the discharge of pollutants into the navigable waters from a vessel or other floating craft shall be subject to any applicable regulations promulgated by the Secretary of the department in which the Coast Guard is operating, establishing specifications for safe transportation, handling, carriage, storage, and stowage of pollutants.

(h) Violation of permit conditions; restriction or prohibition upon introduction of pollutant by source not previously utilizing treatment works

In the event any condition of a permit for discharges from a treatment works (as defined in section 1292 of this title) which is publicly owned is violated, a State with a program approved under subsection (b) of this section or the Administrator, where no State program is approved or where the Administrator determines pursuant to section 1319(a) of this title that a State with an approved program has not commenced appropriate enforcement action with respect to such permit, may proceed in a court of competent jurisdiction to restrict or prohibit the introduction of any pollutant into such treatment works by a source not utilizing such treatment works prior to the finding that such condition was violated.

(i) Federal enforcement not limited

Nothing in this section shall be construed to limit the authority of the Administrator to take action pursuant to section 1319 of this title.

(j) Public information

A copy of each permit application and each permit issued under this section shall be available to the public. Such permit application or permit, or portion thereof, shall further be available on request for the purpose of reproduction.

(k) Compliance with permits

Compliance with a permit issued pursuant to this section shall be deemed compliance, for purposes of sections 1319 and 1365 of this title, with sections 1311, 1312, 1316, 1317, and 1343 of this title, except any standard imposed under section

1317 of this title for a toxic pollutant injurious to human health. Until December 31, 1974, in any case where a permit for discharge has been applied for pursuant to this section, but final administrative disposition of such application has not been made, such discharge shall not be a violation of (1) section 1311, 1316, or 1342 of this title, or (2) section 407 of this title, unless the Administrator or other plaintiff proves that final administrative disposition of such application has not been made because of the failure of the applicant to furnish information reasonably required or requested in order to process the application. For the 180-day period beginning on October 18, 1972, in the case of any point source discharging any pollutant or combination of pollutants immediately prior to such date which source is not subject to section 407 of this title, the discharge by such source shall not be a violation of this chapter if such a source applies for a permit for discharge pursuant to this section within such 180-day period.

(l) Limitation on permit requirement

(1) Agricultural return flows

The Administrator shall not require a permit under this section for discharges composed entirely of return flows from irrigated agriculture, nor shall the Administrator directly or indirectly, require any State to require such a permit.

(2) Stormwater runoff from oil, gas, and mining operations

The Administrator shall not require a permit under this section, nor shall the Administrator directly or indirectly require any State to require a permit, for discharges of stormwater runoff from mining operations or oil and gas exploration, production, processing, or treatment operations or transmission facilities, composed entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with, or do not come into contact with, any overburden, raw material, intermediate products, finished product, byproduct, or waste products located on the site of such operations.

(m) Additional pretreatment of conventional pollutants not required

To the extent a treatment works (as defined in section 1292 of this title) which is publicly owned is not meeting the requirements of a permit issued under this section for such treatment works as a result of inadequate design or operation of such treatment works, the Administrator, in issuing a permit under this section, shall not require pretreatment by a person introducing conventional pollutants identified pursuant to section 1314(a)(4) of this title into such treatment works other than pretreatment required to assure compliance with pretreatment standards under subsection (b)(8) of this section and section 1317(b)(1) of this title. Nothing in this subsection shall affect the Administrator's authority under sections 1317 and 1319 of this title, affect State and local authority under sections 1317(b)(4) and 1370 of this title,

relieve such treatment works of its obligations to meet requirements established under this chapter, or otherwise preclude such works from pursuing whatever feasible options are available to meet its responsibility to comply with its permit under this section.

(n) Partial permit program

(1) State submission

The Governor of a State may submit under subsection (b) of this section a permit program for a portion of the discharges into the navigable waters in such State.

(2) Minimum coverage

A partial permit program under this subsection shall cover, at a minimum, administration of a major category of the discharges into the navigable waters of the State or a major component of the permit program required by subsection (b) of this section.

(3) Approval of major category partial permit programs

The Administrator may approve a partial permit program covering administration of a major category of discharges under this subsection if—

(A) such program represents a complete permit program and covers all of the discharges under the jurisdiction of a department or agency of the State; and

(B) the Administrator determines that the partial program represents a significant and identifiable part of the State program required by subsection (b) of this section.

(4) Approval of major component partial permit programs

The Administrator may approve under this subsection a partial and phased permit program covering administration of a major component (including discharge categories) of a State permit program required by subsection (b) of this section if—

(A) the Administrator determines that the partial program represents a significant and identifiable part of the State program required by subsection (b) of this section; and

(B) the State submits, and the Administrator approves, a plan for the State to assume administration by phases of the remainder of the State program required by subsection (b) of this section by a specified date not more than 5 years after submission of the partial program under this subsection and agrees to make all reasonable efforts to assume such administration by such date.

(o) Anti-backsliding

(1) General prohibition

In the case of effluent limitations established on the basis of subsection (a)(1)(B) of this section, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 1314(b) of this title subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit. In the case of effluent limitations established on the basis of section 1311(b)(1)(C)

or section 1313(d) or (e) of this title, a permit may not be renewed, reissued, or modified to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit except in compliance with section 1313(d)(4) of this title.

(2) Exceptions

A permit with respect to which paragraph (1) applies may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant if—

(A) material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation;

(B)(i) information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance; or

(ii) the Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under subsection (a)(1)(B) of this section;

(C) a less stringent effluent limitation is necessary because of events over which the permittee has no control and for which there is no reasonably available remedy;

(D) the permittee has received a permit modification under section 1311(c), 1311(g), 1311(h), 1311(i), 1311(k), 1311(n), or 1326(a) of this title; or

(E) the permittee has installed the treatment facilities required to meet the effluent limitations in the previous permit and has properly operated and maintained the facilities but has nevertheless been unable to achieve the previous effluent limitations, in which case the limitations in the reviewed, reissued, or modified permit may reflect the level of pollutant control actually achieved (but shall not be less stringent than required by effluent guidelines in effect at the time of permit renewal, reissuance, or modification).

Subparagraph (B) shall not apply to any revised waste load allocations or any alternative grounds for translating water quality standards into effluent limitations, except where the cumulative effect of such revised allocations results in a decrease in the amount of pollutants discharged into the concerned waters, and such revised allocations are not the result of a discharger eliminating or substantially reducing its discharge of pollutants due to complying with the requirements of this chapter or for reasons otherwise unrelated to water quality.

(3) Limitations

In no event may a permit with respect to which paragraph (1) applies be renewed, reissued, or modified to contain an effluent limitation which is less stringent than required by effluent guidelines in effect at the time the permit is renewed, reissued, or modified. In no event may such a permit to discharge into waters be renewed, reissued, or modified to con-

tain a less stringent effluent limitation if the implementation of such limitation would result in a violation of a water quality standard under section 1313 of this title applicable to such waters.

(p) Municipal and industrial stormwater discharges

(1) General rule

Prior to October 1, 1994, the Administrator or the State (in the case of a permit program approved under this section) shall not require a permit under this section for discharges composed entirely of stormwater.

(2) Exceptions

Paragraph (1) shall not apply with respect to the following stormwater discharges:

(A) A discharge with respect to which a permit has been issued under this section before February 4, 1987.

(B) A discharge associated with industrial activity.

(C) A discharge from a municipal separate storm sewer system serving a population of 250,000 or more.

(D) A discharge from a municipal separate storm sewer system serving a population of 100,000 or more but less than 250,000.

(E) A discharge for which the Administrator or the State, as the case may be, determines that the stormwater discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

(3) Permit requirements

(A) Industrial discharges

Permits for discharges associated with industrial activity shall meet all applicable provisions of this section and section 1311 of this title.

(B) Municipal discharge

Permits for discharges from municipal storm sewers—

(i) may be issued on a system- or jurisdiction-wide basis;

(ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and

(iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

(4) Permit application requirements

(A) Industrial and large municipal discharges

Not later than 2 years after February 4, 1987, the Administrator shall establish regulations setting forth the permit application requirements for stormwater discharges described in paragraphs (2)(B) and (2)(C). Applications for permits for such discharges shall be filed no later than 3 years after February 4, 1987. Not later than 4 years after February 4, 1987, the Administrator or the State, as

the case may be, shall issue or deny each such permit. Any such permit shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the date of issuance of such permit.

(B) Other municipal discharges

Not later than 4 years after February 4, 1987, the Administrator shall establish regulations setting forth the permit application requirements for stormwater discharges described in paragraph (2)(D). Applications for permits for such discharges shall be filed no later than 5 years after February 4, 1987. Not later than 6 years after February 4, 1987, the Administrator or the State, as the case may be, shall issue or deny each such permit. Any such permit shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the date of issuance of such permit.

(5) Studies

The Administrator, in consultation with the States, shall conduct a study for the purposes of—

(A) identifying those stormwater discharges or classes of stormwater discharges for which permits are not required pursuant to paragraphs (1) and (2) of this subsection;

(B) determining, to the maximum extent practicable, the nature and extent of pollutants in such discharges; and

(C) establishing procedures and methods to control stormwater discharges to the extent necessary to mitigate impacts on water quality.

Not later than October 1, 1988, the Administrator shall submit to Congress a report on the results of the study described in subparagraphs (A) and (B). Not later than October 1, 1989, the Administrator shall submit to Congress a report on the results of the study described in subparagraph (C).

(6) Regulations

Not later than October 1, 1993, the Administrator, in consultation with State and local officials, shall issue regulations (based on the results of the studies conducted under paragraph (5)) which designate stormwater discharges, other than those discharges described in paragraph (2), to be regulated to protect water quality and shall establish a comprehensive program to regulate such designated sources. The program shall, at a minimum, (A) establish priorities, (B) establish requirements for State stormwater management programs, and (C) establish expeditious deadlines. The program may include performance standards, guidelines, guidance, and management practices and treatment requirements, as appropriate.

(q) Combined sewer overflows

(1) Requirement for permits, orders, and decrees

Each permit, order, or decree issued pursuant to this chapter after December 21, 2000, for a discharge from a municipal combined storm and sanitary sewer shall conform to the Combined Sewer Overflow Control Policy signed by

the Administrator on April 11, 1994 (in this subsection referred to as the “CSO control policy”).

(2) Water quality and designated use review guidance

Not later than July 31, 2001, and after providing notice and opportunity for public comment, the Administrator shall issue guidance to facilitate the conduct of water quality and designated use reviews for municipal combined sewer overflow receiving waters.

(3) Report

Not later than September 1, 2001, the Administrator shall transmit to Congress a report on the progress made by the Environmental Protection Agency, States, and municipalities in implementing and enforcing the CSO control policy.

(r) Discharges incidental to the normal operation of recreational vessels

No permit shall be required under this chapter by the Administrator (or a State, in the case of a permit program approved under subsection (b)) for the discharge of any graywater, bilge water, cooling water, weather deck runoff, oil water separator effluent, or effluent from properly functioning marine engines, or any other discharge that is incidental to the normal operation of a vessel, if the discharge is from a recreational vessel.

(June 30, 1948, ch. 758, title IV, § 402, as added Pub. L. 92–500, § 2, Oct. 18, 1972, 86 Stat. 880; amended Pub. L. 95–217, §§ 33(c), 50, 54(c)(1), 65, 66, Dec. 27, 1977, 91 Stat. 1577, 1588, 1591, 1599, 1600; Pub. L. 100–4, title IV, §§ 401–404(a), 404(c), formerly 404(d), 405, Feb. 4, 1987, 101 Stat. 65–67, 69, renumbered § 404(c), Pub. L. 104–66, title II, § 2021(e)(2), Dec. 21, 1995, 109 Stat. 727; Pub. L. 102–580, title III, § 364, Oct. 31, 1992, 106 Stat. 4862; Pub. L. 106–554, § 1(a)(4) [div. B, title I, § 112(a)], Dec. 21, 2000, 114 Stat. 2763, 2763A–224; Pub. L. 110–288, § 2, July 29, 2008, 122 Stat. 2650.)

AMENDMENTS

- 2008—Subsec. (r). Pub. L. 110–288 added subsec. (r).
 2000—Subsec. (q). Pub. L. 106–554 added subsec. (q).
 1992—Subsec. (p)(1), (6). Pub. L. 102–580 substituted “October 1, 1994” for “October 1, 1992” in par. (1) and “October 1, 1993” for “October 1, 1992” in par. (6).
 1987—Subsec. (a)(1). Pub. L. 100–4, § 404(c), inserted cl. (A) and (B) designations.
 Subsec. (c)(1). Pub. L. 100–4, § 403(b)(2), substituted “as to those discharges” for “as to those navigable waters”.
 Subsec. (c)(4). Pub. L. 100–4, § 403(b)(1), added par. (4).
 Subsec. (l). Pub. L. 100–4, § 401, inserted “Limitation on permit requirement” as subsec. heading designated existing provisions as par. (1) and inserted par. heading, added par. (2), and aligned pars. (1) and (2).
 Subsecs. (m) to (p). Pub. L. 100–4, §§ 402, 403(a), 404(a), 405, added subsecs. (m) to (p).
 1977—Subsec. (a)(5). Pub. L. 95–217, § 50, substituted “section 1314(i)(2)” for “section 1314(h)(2)”.
 Subsec. (b). Pub. L. 95–217, § 50, substituted in provisions preceding par. (1) “subsection (i)(2) of section 1314” for “subsection (h)(2) of section 1314”.
 Subsec. (b)(8). Pub. L. 95–217, § 54(c)(1), inserted reference to identification in terms of character and volume of pollutants of any significant source introducing pollutants subject to pretreatment standards under section 1317(b) of this title into treatment works and programs to assure compliance with pretreatment standards by each source.

establishment of the Administration and made certain administrative provisions relating to pension and retirement rights of the transferees, sick leave benefits, group life insurance, and certain other miscellaneous provisions.

§ 1362. Definitions

Except as otherwise specifically provided, when used in this chapter:

(1) The term “State water pollution control agency” means the State agency designated by the Governor having responsibility for enforcing State laws relating to the abatement of pollution.

(2) The term “interstate agency” means an agency of two or more States established by or pursuant to an agreement or compact approved by the Congress, or any other agency of two or more States, having substantial powers or duties pertaining to the control of pollution as determined and approved by the Administrator.

(3) The term “State” means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and the Trust Territory of the Pacific Islands.

(4) The term “municipality” means a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 1288 of this title.

(5) The term “person” means an individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a State, or any interstate body.

(6) The term “pollutant” means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. This term does not mean (A) “sewage from vessels or a discharge incidental to the normal operation of a vessel of the Armed Forces” within the meaning of section 1322 of this title; or (B) water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil or gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if such State determines that such injection or disposal will not result in the degradation of ground or surface water resources.

(7) The term “navigable waters” means the waters of the United States, including the territorial seas.

(8) The term “territorial seas” means the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, and extending seaward a distance of three miles.

(9) The term “contiguous zone” means the entire zone established or to be established by the

United States under article 24 of the Convention of the Territorial Sea and the Contiguous Zone.

(10) The term “ocean” means any portion of the high seas beyond the contiguous zone.

(11) The term “effluent limitation” means any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance.

(12) The term “discharge of a pollutant” and the term “discharge of pollutants” each means (A) any addition of any pollutant to navigable waters from any point source, (B) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft.

(13) The term “toxic pollutant” means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring.

(14) The term “point source” means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural storm-water discharges and return flows from irrigated agriculture.

(15) The term “biological monitoring” shall mean the determination of the effects on aquatic life, including accumulation of pollutants in tissue, in receiving waters due to the discharge of pollutants (A) by techniques and procedures, including sampling of organisms representative of appropriate levels of the food chain appropriate to the volume and the physical, chemical, and biological characteristics of the effluent, and (B) at appropriate frequencies and locations.

(16) The term “discharge” when used without qualification includes a discharge of a pollutant, and a discharge of pollutants.

(17) The term “schedule of compliance” means a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition, or standard.

(18) The term “industrial user” means those industries identified in the Standard Industrial Classification Manual, Bureau of the Budget, 1967, as amended and supplemented, under the category of “Division D—Manufacturing” and such other classes of significant waste producers as, by regulation, the Administrator deems appropriate.

(19) The term “pollution” means the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.

(20) The term “medical waste” means isolation wastes; infectious agents; human blood and blood products; pathological wastes; sharps; body parts; contaminated bedding; surgical wastes and potentially contaminated laboratory wastes; dialysis wastes; and such additional medical items as the Administrator shall prescribe by regulation.

(21) COASTAL RECREATION WATERS.—

(A) IN GENERAL.—The term “coastal recreation waters” means—

(i) the Great Lakes; and

(ii) marine coastal waters (including coastal estuaries) that are designated under section 1313(c) of this title by a State for use for swimming, bathing, surfing, or similar water contact activities.

(B) EXCLUSIONS.—The term “coastal recreation waters” does not include—

(i) inland waters; or

(ii) waters upstream of the mouth of a river or stream having an unimpaired natural connection with the open sea.

(22) FLOATABLE MATERIAL.—

(A) IN GENERAL.—The term “floatable material” means any foreign matter that may float or remain suspended in the water column.

(B) INCLUSIONS.—The term “floatable material” includes—

(i) plastic;

(ii) aluminum cans;

(iii) wood products;

(iv) bottles; and

(v) paper products.

(23) PATHOGEN INDICATOR.—The term “pathogen indicator” means a substance that indicates the potential for human infectious disease.

(24) OIL AND GAS EXPLORATION AND PRODUCTION.—The term “oil and gas exploration, production, processing, or treatment operations or transmission facilities” means all field activities or operations associated with exploration, production, processing, or treatment operations, or transmission facilities, including activities necessary to prepare a site for drilling and for the movement and placement of drilling equipment, whether or not such field activities or operations may be considered to be construction activities.

(25) RECREATIONAL VESSEL.—

(A) IN GENERAL.—The term “recreational vessel” means any vessel that is—

(i) manufactured or used primarily for pleasure; or

(ii) leased, rented, or chartered to a person for the pleasure of that person.

(B) EXCLUSION.—The term “recreational vessel” does not include a vessel that is subject to Coast Guard inspection and that—

(i) is engaged in commercial use; or

(ii) carries paying passengers.

(June 30, 1948, ch. 758, title V, § 502, as added Pub. L. 92-500, § 2, Oct. 18, 1972, 86 Stat. 886; amended Pub. L. 95-217, § 33(b), Dec. 27, 1977, 91 Stat. 1577; Pub. L. 100-4, title V, §§ 502(a), 503, Feb. 4, 1987, 101 Stat. 75; Pub. L. 100-688, title III, § 3202(a), Nov. 18, 1988, 102 Stat. 4154; Pub. L. 104-106, div. A, title III, § 325(c)(3), Feb. 10, 1996, 110 Stat. 259; Pub. L. 106-284, § 5, Oct. 10, 2000, 114 Stat. 875;

Pub. L. 109-58, title III, § 323, Aug. 8, 2005, 119 Stat. 694; Pub. L. 110-288, § 3, July 29, 2008, 122 Stat. 2650.)

AMENDMENTS

2008—Par. (25). Pub. L. 110-288 added par. (25).

2005—Par. (24). Pub. L. 109-58 added par. (24).

2000—Pars. (21) to (23). Pub. L. 106-284 added pars. (21) to (23).

1996—Par. (6)(A). Pub. L. 104-106 substituted “‘sewage from vessels or a discharge incidental to the normal operation of a vessel of the Armed Forces’” for “‘sewage from vessels’”.

1988—Par. (20). Pub. L. 100-688 added par. (20).

1987—Par. (3). Pub. L. 100-4, § 502(a), inserted “the Commonwealth of the Northern Mariana Islands,” after “Samoa.”

Par. (14). Pub. L. 100-4, § 503, inserted “agricultural stormwater discharges and” after “does not include”.

1977—Par. (14). Pub. L. 95-217 inserted provision that “point source” does not include return flows from irrigated agriculture.

TERMINATION OF TRUST TERRITORY OF THE PACIFIC ISLANDS

For termination of Trust Territory of the Pacific Islands, see note set out preceding section 1681 of Title 48, Territories and Insular Possessions.

TERRITORIAL SEA AND CONTIGUOUS ZONE OF UNITED STATES

For extension of territorial sea and contiguous zone of United States, see Proc. No. 5928 and Proc. No. 7219, respectively, set out as notes under section 1331 of Title 43, Public Lands.

DEFINITION OF “POINT SOURCE”

Section 507 of Pub. L. 100-4 provided that: “For purposes of the Federal Water Pollution Control Act [33 U.S.C. 1251 et seq.], the term ‘point source’ includes a landfill leachate collection system.”

§ 1363. Water Pollution Control Advisory Board

(a) Establishment; composition; terms of office

(1) There is hereby established in the Environmental Protection Agency a Water Pollution Control Advisory Board, composed of the Administrator or his designee, who shall be Chairman, and nine members appointed by the President, none of whom shall be Federal officers or employees. The appointed members, having due regard for the purposes of this chapter, shall be selected from among representatives of various State, interstate, and local governmental agencies, of public or private interests contributing to, affected by, or concerned with pollution, and of other public and private agencies, organizations, or groups demonstrating an active interest in the field of pollution prevention and control, as well as other individuals who are expert in this field.

(2)(A) Each member appointed by the President shall hold office for a term of three years, except that (i) any member appointed to fill a vacancy occurring prior to the expiration of the term for which his predecessor was appointed shall be appointed for the remainder of such term, and (ii) the terms of office of the members first taking office after June 30, 1956, shall expire as follows: three at the end of one year after such date, three at the end of two years after such date, and three at the end of three years after such date, as designated by the President at the time of appointment, and (iii) the term of

(3) AWARD OF FEES.—In any judicial proceeding under this subsection, the court may award costs of litigation (including reasonable attorney and expert witness fees) to any prevailing or substantially prevailing party whenever it determines that such award is appropriate.

(c) Additional evidence

In any judicial proceeding brought under subsection (b) of this section in which review is sought of a determination under this chapter required to be made on the record after notice and opportunity for hearing, if any party applies to the court for leave to adduce additional evidence, and shows to the satisfaction of the court that such additional evidence is material and that there were reasonable grounds for the failure to adduce such evidence in the proceeding before the Administrator, the court may order such additional evidence (and evidence in rebuttal thereof) to be taken before the Administrator, in such manner and upon such terms and conditions as the court may deem proper. The Administrator may modify his findings as to the facts, or make new findings, by reason of the additional evidence so taken and he shall file such modified or new findings, and his recommendation, if any, for the modification or setting aside of his original determination, with the return of such additional evidence.

(June 30, 1948, ch. 758, title V, § 509, as added Pub. L. 92-500, § 2, Oct. 18, 1972, 86 Stat. 891; amended Pub. L. 93-207, § 1(6), Dec. 28, 1973, 87 Stat. 906; Pub. L. 100-4, title III, § 308(b), title IV, § 406(d)(3), title V, § 505(a), (b), Feb. 4, 1987, 101 Stat. 39, 73, 75; Pub. L. 100-236, § 2, Jan. 8, 1988, 101 Stat. 1732.)

AMENDMENTS

1988—Subsec. (b)(3), (4). Pub. L. 100-236 redesignated par. (4) as (3) and struck out former par. (3) relating to venue, which provided for selection procedure in subpar. (A), administrative provisions in subpar. (B), and transfers in subpar. (C).

1987—Subsec. (b)(1). Pub. L. 100-4, §§ 308(b), 406(d)(3), 505(a), substituted “transacts business which is directly affected by such action” for “transacts such business”, “120” for “ninety”, and “120th” for “ninetieth”, substituted “1316, or 1345 of this title” for “or 1316 of this title” in cl. (E), and added cl. (G).

Subsec. (b)(3), (4). Pub. L. 100-4, § 505(b), added pars. (3) and (4).

1973—Subsec. (b)(1)(C). Pub. L. 93-207 substituted “pretreatment” for “treatment”.

EFFECTIVE DATE OF 1988 AMENDMENT

Amendment by Pub. L. 100-236 effective 180 days after Jan. 8, 1988, see section 3 of Pub. L. 100-236, set out as a note under section 2112 of Title 28, Judiciary and Judicial Procedure.

§ 1370. State authority

Except as expressly provided in this chapter, nothing in this chapter shall (1) preclude or deny the right of any State or political subdivision thereof or interstate agency to adopt or enforce (A) any standard or limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution; except that if an effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance is in effect under this chapter, such State or po-

litical subdivision or interstate agency may not adopt or enforce any effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance which is less stringent than the effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance under this chapter; or (2) be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters (including boundary waters) of such States.

(June 30, 1948, ch. 758, title V, § 510, as added Pub. L. 92-500, § 2, Oct. 18, 1972, 86 Stat. 893.)

§ 1371. Authority under other laws and regulations

(a) Impairment of authority or functions of officials and agencies; treaty provisions

This chapter shall not be construed as (1) limiting the authority or functions of any officer or agency of the United States under any other law or regulation not inconsistent with this chapter; (2) affecting or impairing the authority of the Secretary of the Army (A) to maintain navigation or (B) under the Act of March 3, 1899, (30 Stat. 1112); except that any permit issued under section 1344 of this title shall be conclusive as to the effect on water quality of any discharge resulting from any activity subject to section 403 of this title, or (3) affecting or impairing the provisions of any treaty of the United States.

(b) Discharges of pollutants into navigable waters

Discharges of pollutants into the navigable waters subject to the Rivers and Harbors Act of 1910 (36 Stat. 593; 33 U.S.C. 421) and the Supervisory Harbors Act of 1888 (25 Stat. 209; 33 U.S.C. 441-451b) shall be regulated pursuant to this chapter, and not subject to such Act of 1910 and the Act of 1888 except as to effect on navigation and anchorage.

(c) Action of the Administrator deemed major Federal action; construction of the National Environmental Policy Act of 1969

(1) Except for the provision of Federal financial assistance for the purpose of assisting the construction of publicly owned treatment works as authorized by section 1281 of this title, and the issuance of a permit under section 1342 of this title for the discharge of any pollutant by a new source as defined in section 1316 of this title, no action of the Administrator taken pursuant to this chapter shall be deemed a major Federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act of 1969 (83 Stat. 852) [42 U.S.C. 4321 et seq.]; and

(2) Nothing in the National Environmental Policy Act of 1969 (83 Stat. 852) shall be deemed to—

(A) authorize any Federal agency authorized to license or permit the conduct of any activity which may result in the discharge of a pollutant into the navigable waters to review any effluent limitation or other requirement established pursuant to this chapter or the adequacy of any certification under section 1341 of this title; or

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goals established in the State's water quality standards.

(d) These control measures are implemented by issuing permits, building publicly-owned treatment works (POTWs), instituting best management practices for nonpoint sources of pollution and other means. After control measures are in place, the State evaluates the extent of the resulting improvements in water quality, conducts additional data gathering and planning to determine needed modifications in control measures and again institutes control measures.

(e) This process is a dynamic one, in which requirements and emphases vary over time. At present, States have completed WQM plans which are generally comprehensive in geographic and programmatic scope. Technology based controls are being implemented for most point sources of pollution. However, WQS have not been attained in many water bodies and are threatened in others.

(f) Present continuing planning requirements serve to identify these critical water bodies, develop plans for achieving higher levels of abatement and specify additional control measures. Consequently, this regulation reflects a programmatic emphasis on concentrating planning and abatement activities on priority water quality issues and geographic areas. EPA will focus its grant funds on activities designed to address these priorities. Annual work programs negotiated between EPA and State and interstate agencies will reflect this emphasis.

§ 130.1 Applicability.

(a) This subpart applies to all State, eligible Indian Tribe, interstate, areawide and regional and local CWA water quality planning and management activities undertaken on or after February 11, 1985 including all updates and continuing certifications for approved Water Quality Management (WQM) plans developed under sections 208 and 303 of the Act.

(b) Planning and management activities undertaken prior to February 11, 1985 are governed by the requirements

of the regulations in effect at the time of the last grant award.

[50 FR 1779, Jan. 11, 1985, as amended at 54 FR 14359, Apr. 11, 1989; 59 FR 13817, Mar. 23, 1994]

§ 130.2 Definitions.

(a) *The Act*. The Clean Water Act, as amended, 33 U.S.C. 1251 *et seq.*

(b) *Indian Tribe*. Any Indian Tribe, band, group, or community recognized by the Secretary of the Interior and exercising governmental authority over a Federal Indian reservation.

(c) *Pollution*. The man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.

(d) *Water quality standards (WQS)*. Provisions of State or Federal law which consist of a designated use or uses for the waters of the United States and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Act.

(e) *Load or loading*. An amount of matter or thermal energy that is introduced into a receiving water; to introduce matter or thermal energy into a receiving water. Loading may be either man-caused (pollutant loading) or natural (natural background loading).

(f) *Loading capacity*. The greatest amount of loading that a water can receive without violating water quality standards.

(g) *Load allocation (LA)*. The portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading, which may range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting the loading. Wherever possible, natural and nonpoint source loads should be distinguished.

(h) *Wasteload allocation (WLA)*. The portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of

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water quality-based effluent limitation.

(i) *Total maximum daily load (TMDL)*. The sum of the individual WLAs for point sources and LAs for nonpoint sources and natural background. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs.

(j) *Water quality limited segment*. Any segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by sections 301(b) and 306 of the Act.

(k) *Water quality management (WQM) plan*. A State or areawide waste treatment management plan developed and updated in accordance with the provisions of sections 205(j), 208 and 303 of the Act and this regulation.

(l) *Areawide agency*. An agency designated under section 208 of the Act, which has responsibilities for WQM planning within a specified area of a State.

(m) *Best Management Practice (BMP)*. Methods, measures or practices selected by an agency to meet its nonpoint source control needs. BMPs include but are not limited to structural and nonstructural controls and operation and maintenance procedures. BMPs can be applied before, during and after pollution-producing activities to reduce or eliminate the introduction of pollutants into receiving waters.

(n) *Designated management agency (DMA)*. An agency identified by a WQM plan and designated by the Governor to

implement specific control recommendations.

[50 FR 1779, Jan. 11, 1985, as amended at 54 FR 14359, Apr. 11, 1989]

40 CFR Ch. I (7–1–13 Edition)**§ 130.3 Water quality standards.**

A water quality standard (WQS) defines the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses. States and EPA adopt WQS to protect public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act (CWA). *Serve the purposes of Act* (as defined in sections 101(a)(2) and 303(c) of the Act) means that WQS should, wherever attainable, provide water quality for the protection and propagation of fish, shellfish and wildlife and for recreation in and on the water and take into consideration their use and value for public water supplies, propagation of fish, shellfish, wildlife, recreation in and on the water, and agricultural, industrial and other purposes including navigation.

Such standards serve the dual purposes of establishing the water quality goals for a specific water body and serving as the regulatory basis for establishment of water quality-based treatment controls and strategies beyond the technology-based level of treatment required by sections 301(b) and 306 of the Act. States shall review and revise WQS in accordance with applicable regulations and, as appropriate, update their Water Quality Management (WQM) plans to reflect such revisions. Specific WQS requirements are found in 40 CFR part 131.

§ 130.4 Water quality monitoring.

(a) In accordance with section 106(e)(1), States must establish appropriate monitoring methods and procedures (including biological monitoring) necessary to compile and analyze data on the quality of waters of the United States and, to the extent practicable, ground-waters. This requirement need not be met by Indian Tribes. However, any monitoring and/or analysis activities undertaken by a Tribe must be performed in accordance with EPA's

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WQM plans as described in §§130.12(a) and 130.12(b).

[50 FR 1779, Jan. 11, 1985, as amended at 54 FR 14360, Apr. 11, 1989; 59 FR 13818, Mar. 23, 1994]

§ 130.7 Total maximum daily loads (TMDL) and individual water quality-based effluent limitations.

(a) *General.* The process for identifying water quality limited segments still requiring wasteload allocations, load allocations and total maximum daily loads (WLAS/LAs and TMDLs), setting priorities for developing these loads; establishing these loads for segments identified, including water quality monitoring, modeling, data analysis, calculation methods, and list of pollutants to be regulated; submitting the State's list of segments identified, priority ranking, and loads established (WLAS/LAs/TMDLs) to EPA for approval; incorporating the approved loads into the State's WQM plans and NPDES permits; and involving the public, affected dischargers, designated areawide agencies, and local governments in this process shall be clearly described in the State Continuing Planning Process (CPP).

(b) Identification and priority setting for water quality-limited segments still requiring TMDLs.

(1) Each State shall identify those water quality-limited segments still requiring TMDLs within its boundaries for which:

(i) Technology-based effluent limitations required by sections 301(b), 306, 307, or other sections of the Act;

(ii) More stringent effluent limitations (including prohibitions) required by either State or local authority preserved by section 510 of the Act, or Federal authority (law, regulation, or treaty); and

(iii) Other pollution control requirements (e.g., best management practices) required by local, State, or Federal authority are not stringent enough to implement any water quality standards (WQS) applicable to such waters.

(2) Each State shall also identify on the same list developed under paragraph (b)(1) of this section those water quality-limited segments still requiring TMDLs or parts thereof within its

boundaries for which controls on thermal discharges under section 301 or State or local requirements are not stringent enough to assure protection and propagation of a balanced indigenous population of shellfish, fish and wildlife.

(3) For the purposes of listing waters under §130.7(b), the term “water quality standard applicable to such waters” and “applicable water quality standards” refer to those water quality standards established under section 303 of the Act, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements.

(4) The list required under §§130.7(b)(1) and 130.7(b)(2) of this section shall include a priority ranking for all listed water quality-limited segments still requiring TMDLs, taking into account the severity of the pollution and the uses to be made of such waters and shall identify the pollutants causing or expected to cause violations of the applicable water quality standards. The priority ranking shall specifically include the identification of waters targeted for TMDL development in the next two years.

(5) Each State shall assemble and evaluate all existing and readily available water quality-related data and information to develop the list required by §§130.7(b)(1) and 130.7(b)(2). At a minimum “all existing and readily available water quality-related data and information” includes but is not limited to all of the existing and readily available data and information about the following categories of waters:

(i) Waters identified by the State in its most recent section 305(b) report as “partially meeting” or “not meeting” designated uses or as “threatened”;

(ii) Waters for which dilution calculations or predictive models indicate nonattainment of applicable water quality standards;

(iii) Waters for which water quality problems have been reported by local, state, or federal agencies; members of the public; or academic institutions. These organizations and groups should be actively solicited for research they may be conducting or reporting. For example, university researchers, the

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United States Department of Agriculture, the National Oceanic and Atmospheric Administration, the United States Geological Survey, and the United States Fish and Wildlife Service are good sources of field data; and

(iv) Waters identified by the State as impaired or threatened in a nonpoint assessment submitted to EPA under section 319 of the CWA or in any updates of the assessment.

(6) Each State shall provide documentation to the Regional Administrator to support the State's determination to list or not to list its waters as required by §§130.7(b)(1) and 130.7(b)(2). This documentation shall be submitted to the Regional Administrator together with the list required by §§130.7(b)(1) and 130.7(b)(2) and shall include at a minimum:

(i) A description of the methodology used to develop the list; and

(ii) A description of the data and information used to identify waters, including a description of the data and information used by the State as required by §130.7(b)(5); and

(iii) A rationale for any decision to not use any existing and readily available data and information for any one of the categories of waters as described in §130.7(b)(5); and

(iv) Any other reasonable information requested by the Regional Administrator. Upon request by the Regional Administrator, each State must demonstrate good cause for not including a water or waters on the list. Good cause includes, but is not limited to, more recent or accurate data; more sophisticated water quality modeling; flaws in the original analysis that led to the water being listed in the categories in §130.7(b)(5); or changes in conditions, e.g., new control equipment, or elimination of discharges.

(c) Development of TMDLs and individual water quality based effluent limitations.

(1) Each State shall establish TMDLs for the water quality limited segments identified in paragraph (b)(1) of this section, and in accordance with the priority ranking. For pollutants other than heat, TMDLs shall be established at levels necessary to attain and maintain the applicable narrative and numerical WQS 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. Determinations of TMDLs shall take into account critical conditions for stream flow, loading, and water quality parameters.

(i) TMDLs may be established using a pollutant-by-pollutant or biomonitoring approach. In many cases both techniques may be needed. Site-specific information should be used wherever possible.

(ii) TMDLs shall be established for all pollutants preventing or expected to prevent attainment of water quality standards as identified pursuant to paragraph (b)(1) of this section. Calculations to establish TMDLs shall be subject to public review as defined in the State CPP.

(2) Each State shall estimate for the water quality limited segments still requiring TMDLs identified in paragraph (b)(2) of this section, the total maximum daily thermal load which cannot be exceeded in order to assure protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife. Such estimates shall take into account the normal water temperatures, flow rates, seasonal variations, existing sources of heat input, and the dissipative capacity of the identified waters or parts thereof. Such estimates shall include a calculation of the maximum heat input that can be made into each such part and shall include a margin of safety which takes into account any lack of knowledge concerning the development of thermal water quality criteria for protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife in the identified waters or parts thereof.

(d) *Submission and EPA approval.* (1) Each State shall submit biennially to the Regional Administrator beginning in 1992 the list of waters, pollutants causing impairment, and the priority ranking including waters targeted for TMDL development within the next two years as required under paragraph (b) of this section. For the 1992 biennial submission, these lists are due no later than October 22, 1992. Thereafter, each

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State shall submit to EPA lists required under paragraph (b) of this section on April 1 of every even-numbered year. For the year 2000 submission, a State must submit a list required under paragraph (b) of this section only if a court order or consent decree, or commitment in a settlement agreement dated prior to January 1, 2000, expressly requires EPA to take action related to that State's year 2000 list. For the year 2002 submission, a State must submit a list required under paragraph (b) of this section by October 1, 2002, unless a court order, consent decree or commitment in a settlement agreement expressly requires EPA to take an action related to that State's 2002 list prior to October 1, 2002, in which case, the State must submit a list by April 1, 2002. The list of waters may be submitted as part of the State's biennial water quality report required by § 130.8 of this part and section 305(b) of the CWA or submitted under separate cover. All WLAs/LAs and TMDLs established under paragraph (c) for water quality limited segments shall continue to be submitted to EPA for review and approval. Schedules for submission of TMDLs shall be determined by the Regional Administrator and the State.

(2) The Regional Administrator shall either approve or disapprove such listing and loadings not later than 30 days after the date of submission. The Regional Administrator shall approve a list developed under § 130.7(b) that is submitted after the effective date of this rule only if it meets the requirements of § 130.7(b). If the Regional Administrator approves such listing and loadings, the State shall incorporate them into its current WQM plan. If the Regional Administrator disapproves such listing and loadings, he shall, not later than 30 days after the date of such disapproval, identify such waters in such State and establish such loads for such waters as determined necessary to implement applicable WQS. The Regional Administrator shall promptly issue a public notice seeking comment on such listing and loadings. After considering public comment and making any revisions he deems appropriate, the Regional Administrator shall transmit the listing and loads to

the State, which shall incorporate them into its current WQM plan.

(e) For the specific purpose of developing information and as resources allow, each State shall identify all segments within its boundaries which it has not identified under paragraph (b) of this section and estimate for such waters the TMDLs with seasonal variations and margins of safety, for those pollutants which the Regional Administrator identifies under section 304(a)(2) as suitable for such calculation and for thermal discharges, at a level that would assure protection and propagation of a balanced indigenous population of fish, shellfish and wildlife. However, there is no requirement for such loads to be submitted to EPA for approval, and establishing TMDLs for those waters identified in paragraph (b) of this section shall be given higher priority.

[50 FR 1779, Jan. 11, 1985, as amended at 57 FR 33049, July 24, 1992; 65 FR 17170, Mar. 31, 2000; 66 FR 53048, Oct. 18, 2001]

§ 130.8 Water quality report.

(a) Each State shall prepare and submit biennially to the Regional Administrator a water quality report in accordance with section 305(b) of the Act. The water quality report serves as the primary assessment of State water quality. Based upon the water quality data and problems identified in the 305(b) report, States develop water quality management (WQM) plan elements to help direct all subsequent control activities. Water quality problems identified in the 305(b) report should be analyzed through water quality management planning leading to the development of alternative controls and procedures for problems identified in the latest 305(b) report. States may also use the 305(b) report to describe ground-water quality and to guide development of ground-water plans and programs. Water quality problems identified in the 305(b) report should be emphasized and reflected in the State's WQM plan and annual work program under sections 106 and 205(j) of the Clean Water Act.

(b) Each such report shall include but is not limited to the following:

(1) A description of the water quality of all waters of the United States and

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Tribe submitted pursuant to §131.8(b) in a timely manner. He shall promptly notify the Indian Tribe of receipt of the application.

(2) Within 30 days after receipt of the Indian Tribe's application the Regional Administrator shall provide appropriate notice. Notice shall:

(i) Include information on the substance and basis of the Tribe's assertion of authority to regulate the quality of reservation waters; and

(ii) Be provided to all appropriate governmental entities.

(3) The Regional Administrator shall provide 30 days for comments to be submitted on the Tribal application. Comments shall be limited to the Tribe's assertion of authority.

(4) If a Tribe's asserted authority is subject to a competing or conflicting claim, the Regional Administrator, after due consideration, and in consideration of other comments received, shall determine whether the Tribe has adequately demonstrated that it meets the requirements of §131.8(a)(3).

(5) Where the Regional Administrator determines that a Tribe meets the requirements of this section, he shall promptly provide written notification to the Indian Tribe that the Tribe is authorized to administer the Water Quality Standards program.

[56 FR 64895, Dec. 12, 1991, as amended at 59 FR 64344, Dec. 14, 1994]

Subpart B—Establishment of Water Quality Standards

§ 131.10 Designation of uses.

(a) Each State must specify appropriate water uses to be achieved and protected. The classification of the waters of the State must take into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation. In no case shall a State adopt waste transport or waste assimilation as a designated use for any waters of the United States.

(b) In designating uses of a water body and the appropriate criteria for those uses, the State shall take into

consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.

(c) States may adopt sub-categories of a use and set the appropriate criteria to reflect varying needs of such sub-categories of uses, for instance, to differentiate between cold water and warm water fisheries.

(d) At a minimum, uses are deemed attainable if they can be achieved by the imposition of effluent limits required under sections 301(b) and 306 of the Act and cost-effective and reasonable best management practices for nonpoint source control.

(e) Prior to adding or removing any use, or establishing sub-categories of a use, the State shall provide notice and an opportunity for a public hearing under §131.20(b) of this regulation.

(f) States may adopt seasonal uses as an alternative to reclassifying a water body or segment thereof to uses requiring less stringent water quality criteria. If seasonal uses are adopted, water quality criteria should be adjusted to reflect the seasonal uses, however, such criteria shall not preclude the attainment and maintenance of a more protective use in another season.

(g) States may remove a designated use which is *not* an existing use, as defined in §131.3, or establish sub-categories of a use if the State can demonstrate that attaining the designated use is not feasible because:

(1) Naturally occurring pollutant concentrations prevent the attainment of the use; or

(2) Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or

(3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or

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(4) Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or

(5) Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or

(6) Controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact.

(h) States may not remove designated uses if:

(1) They are existing uses, as defined in § 131.3, unless a use requiring more stringent criteria is added; or

(2) Such uses will be attained by implementing effluent limits required under sections 301(b) and 306 of the Act and by implementing cost-effective and reasonable best management practices for nonpoint source control.

(i) Where existing water quality standards specify designated uses less than those which are presently being attained, the State shall revise its standards to reflect the uses actually being attained.

(j) A State must conduct a use attainability analysis as described in § 131.3(g) whenever:

(1) The State designates or has designated uses that do not include the uses specified in section 101(a)(2) of the Act, or

(2) The State wishes to remove a designated use that is specified in section 101(a)(2) of the Act or to adopt subcategories of uses specified in section 101(a)(2) of the Act which require less stringent criteria.

(k) A State is not required to conduct a use attainability analysis under this regulation whenever designating uses which include those specified in section 101(a)(2) of the Act.

§ 131.11 Criteria.

(a) *Inclusion of pollutants:* (1) States must adopt those water quality criteria that protect the designated use.

Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use. For waters with multiple use designations, the criteria shall support the most sensitive use.

(2) *Toxic pollutants.* States must review water quality data and information on discharges to identify specific water bodies where toxic pollutants may be adversely affecting water quality or the attainment of the designated water use or where the levels of toxic pollutants are at a level to warrant concern and must adopt criteria for such toxic pollutants applicable to the water body sufficient to protect the designated use. Where a State adopts narrative criteria for toxic pollutants to protect designated uses, the State must provide information identifying the method by which the State intends to regulate point source discharges of toxic pollutants on water quality limited segments based on such narrative criteria. Such information may be included as part of the standards or may be included in documents generated by the State in response to the Water Quality Planning and Management Regulations (40 CFR part 35).

(b) Form of criteria: In establishing criteria, States should:

(1) Establish numerical values based on:

(i) 304(a) Guidance; or

(ii) 304(a) Guidance modified to reflect site-specific conditions; or

(iii) Other scientifically defensible methods;

(2) Establish narrative criteria or criteria based upon biomonitoring methods where numerical criteria cannot be established or to supplement numerical criteria.

§ 131.12 Antidegradation policy.

(a) The State shall develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy pursuant to this subpart. The antidegradation policy and implementation methods shall, at a minimum, be consistent with the following:

(1) Existing instream water uses and the level of water quality necessary to

EXHIBIT 1

Quantifying Groundwater's Role in Delaying Improvements to Chesapeake Bay Water Quality

Ward E. Sanford*

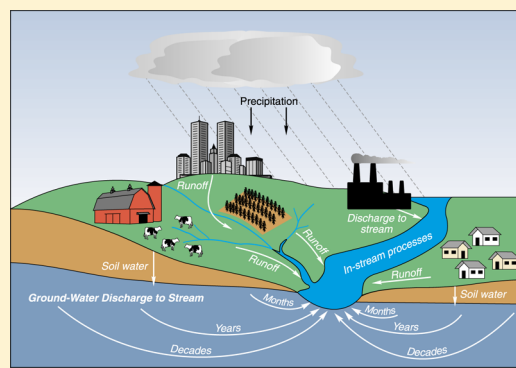
United States Geological Survey, Reston, Virginia 20192, United States

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USGS, Richmond, Virginia 23228, United States

S Supporting Information

ABSTRACT: A study has been undertaken to determine the time required for the effects of nitrogen-reducing best management practices (BMPs) implemented at the land surface to reach the Chesapeake Bay via groundwater transport to streams. To accomplish this, a nitrogen mass-balance regression (NMBR) model was developed and applied to seven watersheds on the Delmarva Peninsula. The model included the distribution of groundwater return times obtained from a regional groundwater-flow (GWF) model, the history of nitrogen application at the land surface over the last century, and parameters that account for denitrification. The model was (1) able to reproduce nitrate concentrations in streams and wells over time, including a recent decline in the rate at which concentrations have been increasing, and (2) used to forecast future nitrogen delivery from the Delmarva Peninsula to the Bay given different scenarios of nitrogen load reduction to the water table. The relatively deep porous aquifers of the Delmarva yield longer groundwater return times than those reported earlier for western parts of the Bay watershed. Accordingly, several decades will be required to see the full effects of current and future BMPs. The magnitude of this time lag is critical information for Chesapeake Bay watershed managers and stakeholders.



■ INTRODUCTION

Nitrate is one of the most widespread contaminants in streams and shallow aquifers in the United States,^{1–3} with fertilizer applied in agriculture being one of the dominant sources of nitrogen. The Chesapeake Bay watershed contains a number of streams and rivers with elevated levels of nitrate that feed into and adversely affect the water quality of the Bay.^{4,5} Much of the nitrate in the streams and rivers is derived from groundwater that discharges as base flow,^{4,6} as many areas, especially those with agriculture, have elevated levels of nitrate in shallow groundwater.⁷ The U.S. Environmental Protection Agency (USEPA) has been working with the local states to reduce loading of nitrogen to the Bay by developing a watershed model⁸ to help quantify the distribution of nitrogen sources within the watershed and forecast future water quality conditions in the Bay. The USEPA Chesapeake Bay Partnership (CBP) watershed model also accounts for actions taken by local stakeholders to help reduce nitrate runoff, usually in the form of implementing best management practices (BMPs) such as planting winter cover crops^{9,10} or establishing forest buffer zones adjacent to streams.^{11,12}

The USEPA-CBP model is predominantly a surface water model with a groundwater storage component to simulate transient flow conditions, but the nutrient components of the

model do not account for the lag time of nitrate passing through the groundwater system. In terms of water-quality management, the lag time is the time between implementing improved pollution-management practices on the ground and seeing the improved water quality in the stream. This lag time between implementation and result is a great concern for water quality managers and regulators¹³ because society usually desires a relatively quick return on our investments, and may begin to doubt the effectiveness of the actions if beneficial results are delayed too long. Groundwater return times (the time required for recharge at the water table to return to a stream through groundwater) within most areas of the Chesapeake Bay watershed have been documented to range typically from years to decades.^{14,15} In particular, long-term tritium records from the Susquehanna and Potomac Rivers have revealed that approximately half of the water discharging is greater than one-year old, with the mean age of the older fraction for the two rivers being ten and twenty years, respectively.¹⁶ Given that the distribution of the age of groundwater

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that discharges as base flow usually follows a logarithmic pattern with a long tail of old ages,^{17,18} the effect from fertilizer application or fertilizer reduction at the land surface in many areas can be expected to take decades to reach its full extent in terms of flux to the stream.¹⁹ Because fertilizer application in the Chesapeake Bay watershed rose dramatically during the 1960s and 1970s,^{14,15} many local watersheds are not yet at a steady-state condition with respect to nitrate. Groundwater return times need to be accounted for if trends in nitrate concentrations in many of the streams in the Bay watershed are to be adequately explained. In addition, if forecasts of future stream loads to the Bay and assessments of the long-term effectiveness of BMPs are to be reliable in a temporal context, groundwater return times need to be included in the accounting.

The objective of this study was to create a model which could forecast future nitrogen loadings to the Bay by including the effects of groundwater return times. A nitrogen mass-balance regression (NMBR) model was developed to simulate nitrate concentrations that could be matched against those observed in wells and streams in several watersheds across the Delmarva Peninsula (Figure 1). The Delmarva was chosen because of its proximity to the Bay, its high nitrogen yields,^{20,21} the availability of a well-calibrated groundwater-flow (GWF) model,²² and its thick, porous surficial aquifer that represents the setting of the Coastal Plain Province, which in turn represents a substantial source of the overall nitrogen entering the Bay.²¹ In order to forecast future nitrate delivery to the Bay from the peninsula, the NMBR model had to incorporate the history of fertilizer use and the distribution of groundwater return times to streams within the peninsula. The groundwater return times were obtained from a recently developed GWF model of the shallow aquifer system of the Delmarva Peninsula.²² In addition to the fertilizer-use (both inorganic and manure) history and groundwater return times, the NMBR model includes denitrification parameters and an improvement factor for uptake efficiencies that represented any improvements in nutrient management practices over time. The NMBR model was used to forecast future nitrogen loading to the Bay given different future load-reduction scenarios at the land-surface.

MATERIALS AND METHODS

Groundwater-Flow (GWF) Model. The GWF model is a three-dimensional, steady-state flow model of the shallow aquifer system of the Delmarva Peninsula, constructed using the United States Geological Survey (USGS) code MODFLOW.²³ Details of the model grid construction were documented in an earlier report.²² The key components in the determination of groundwater return times are the recharge rate, the depth of the flow system, and the porosity.²⁴ The depth of the shallow flow system in the GWF model was incorporated using a digital geologic framework, which established the location and depths of the southeasterly dipping coastal plain formations that typically alternate between sand-rich aquifers and clay-rich aquitards. Quaternary-age permeable sands overly these formations across most of the peninsula. The porosity value for the model was adjusted to fit the value of groundwater ages measured using chlorofluorocarbon concentrations (CFCs) and tritium-helium ratios at 24 wells located across the peninsula.²⁵ A value of porosity of 0.35 was calibrated to be the best fit for all of the formations, and was consistent with values measured on samples of the unconsolidated sediments in these surficial formations.²⁶ Other parameters in

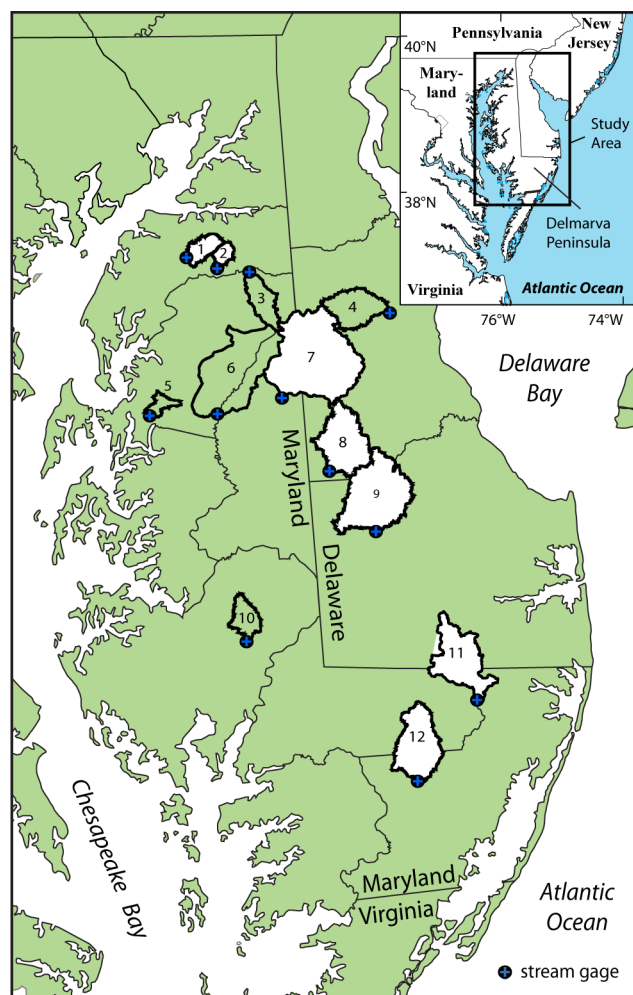


Figure 1. Locations of USGS stream gages and watersheds on the Delmarva Peninsula with real-time flow and water quality data used in this study. Watersheds in white have historical stream-nitrate concentration data that were used to calibrate the nitrogen mass-balance regression (NMBR) model. See Table 1 for details associated with numbered watersheds.

the model, such as hydraulic conductivity values of aquifers and confining units, were calibrated against numerous water levels in wells.²²

Although recharge rates can be estimated using a variety of techniques,²⁷ the rate across the peninsula was determined by using a water-balance regression (WBR) model²⁸ developed for Virginia that included the Delmarva Peninsula.²⁹ Long-term recharge is calculated in the WBR model based on the assumption that recharge is equal to the precipitation minus the surface runoff minus evapotranspiration. The precipitation and ET were obtained and calculated from climate data.³⁰ The surface runoff was estimated from chemical hydrograph separations^{31,32} on a number of streams in the coastal plain,²⁹ and determined by regression to be a strong function of the sediment size of the surficial formation. In the WBR model the surface runoff fraction of total runoff averaged about 0.15 (Table 1), and was varied as a function of the clay content of the soil. This fraction underscores the dominance of groundwater in delivering nitrogen to streams on the Delmarva Peninsula.¹⁵ In the GWF model the recharge rates from the WBR model along with “drain” boundary conditions were assigned everywhere at the land surface—a method that allows

Table 1. Age Composition of Streamflow and Base Flow in Streams at Real-Time USGS Gages on the Delmarva Peninsula Based on Groundwater-Flow (GWF) Model Results^{22 a}

USGS real-time gage number	stream name	surface runoff	groundwater discharge					
		high flow ^c		base flow age ^d				
		hours to days old	>days and <1 year old ^b	1 to <7 years old	7 to <13 years old	13 to <50 years old	≥ 50 years old	median base-flow age (years)
01493500	Morgan Creek	16.4	10.1	10.5	7.7	20.6	34.7	40
01493112	Chesterville Branch	15.5	3.8	8.4	9.2	30.2	32.8	28
01491000	Choptank River	15.0	18.1	10.1	8.8	23.8	24.2	27
01488500	Marshyhope Creek	15.6	17.2	10.4	8.6	29.4	18.8	25
01487000	Nanticoke River	14.0	12.3	13.0	11.2	34.5	15.0	20
01485000	Pocomoke River	14.8	14.0	4.9	4.8	32.5	29.0	34
01485500	Nassawango Creek	15.6	9.2	6.2	8.1	30.2	30.8	32
average of seven watersheds		15.3	12.1	9.1	8.3	28.7	26.5	29.4
composite values		hours to <1 year old		1 to <7	7 to <13	≥13 years old		same
average of seven watersheds		27.4		9.1	8.3	55.2		29.4
earlier USGS estimate for Chesapeake Bay Watershed ¹⁴		50.0		12.5	25	12.5		10

^aA comparison is made to an earlier estimate¹⁴ of base-flow ages for the Chesapeake Bay watershed. All values are percent of total streamflow unless otherwise indicated. ^bBased on the amount of simulated rejected recharge in the groundwater flow model. In this study rejected recharge at each cell is defined as the minimum value of either the water-balance regression (WBR) recharge applied at the cell, or the drain-discharge flux at the cell. ^cDefined as the flow rate above which nitrate concentrations decrease with increasing flow. ^dBased on the groundwater return times simulated in the groundwater flow model.

the model to naturally determine the groundwater discharge locations and rates in the stream networks.³³

The GWF model was used to determine the distribution of base-flow ages to the streams by using the USGS model MODPATH,³⁴ which allows the calculation of a groundwater travel time along any given flow pathline within a MODFLOW model. A groundwater pathline was traced (and travel time calculated) from every recharge cell in the GWF model on the peninsula to its discharge location either at a stream or coastal cell. These groundwater return times (base-flow ages) calculated using MODPATH with the GWF model were compiled and used in the NMBR model. An earlier local cross-sectional model³⁵ was used in this way to estimate groundwater ages in the shallow Delmarva aquifer, and yielded ages similar in range to those of the GWF model.²²

Nitrogen Mass-Balance Regression (NMBR) Model. In order to explain both the spatial and temporal trends in stream and groundwater nitrogen concentrations, a NMBR model was created that began with (1) the loading of nitrogen across the land surface over time, (2) dissolving that nitrogen in the recharge and tracking and timing its path through the aquifer to the seven streams, and (3) allowing for nitrogen loss along the way by plant uptake and denitrification in order to (4) calculate the final concentrations of nitrate in the streams at the measurement sites. Calculations were made for step (1) using the fertilizer and manure input histories, step (2) using the GWF model, and by combining these with steps (3) and (4) using the following equations to calculate a mean base-flow concentration in a stream for the year it was sampled:

$$C_s = (1 - D_s)(1 - D_r) \sum_{i=1}^{Nyr} \left(\left(\frac{Q_{iag}}{Q_t} \right) C_{iag} + \left(\frac{Q_{ina}}{Q_t} \right) C_{na} - D_g t_i \right) \quad (1)$$

$$\text{and } C_{iag} = (L_{if}(1 - E_f) + L_{im}(1 - E_m)) / (R_w A_w) \quad (2)$$

where C_s is the mean nitrate concentration for a stream for a given year, $[ML^{-3}]$, D_s and D_r are soil and riparian denitrification factors (dimensionless), Nyr is the number of yearly base-flow-age bins ($=200$), (Q_i/Q_t) is the fraction of base flow of that age within the stream's total base-flow (dimensionless), C_{iag} and C_{na} are concentrations of nitrate in recharge $[ML^{-3}]$, D_g is a groundwater denitrification factor $[ML^{-3}t^{-1}]$, t_i is the base-flow age (t), L_i is an annual nitrogen application (load) at the land surface (M), E is an uptake efficiency (dimensionless), R_w is the mean annual recharge for a watershed (Lt^{-1}), A_w is the area of a watershed (L^2), and the subscripts r , ag , na , f , and m correspond to recharge, agricultural, nonagricultural, inorganic fertilizer, and poultry manure, respectively. Groundwater denitrification could have been represented as either a zero or first order loss term, depending on whether the loss rate is constant in time or a function of concentration. D_g in eq 1 is listed as a zero-order loss term, and the parameter estimation revealed that the available data were not sufficient to constrain a parameter for either a zero- or first-order term independently from the other denitrification terms using this approach. As the nitrate data are scattered among various watersheds at various times and not along a single or a few well-defined flow paths, they do not lend themselves to determining the physical process by which soil and riparian denitrification are occurring, and thus the two terms are simple multipliers to estimate the fraction of nitrate that is lost to each process by their correlation with soil-drainage character and stream length. Equations 1 and 2 were applied to each of the seven watersheds at each of the years for which nitrate concentrations were observed and simulated over time (Table 1, Figure 1). More details of the implementation of eqs 1 and 2 are in provided in the Supporting Information (SI).

Fertilizer application data was taken from inorganic fertilizer sale data compiled by the USGS.^{36,37} Poultry manure application estimates were obtained from past agricultural census data of poultry.^{37,38} Both of these data sets were available only at the county levels.³⁹ Soybeans also contribute substantial nitrogen to the subsurface by nitrogen fixation, but the net addition to the subsurface is relatively small compared to fertilizer and manure inputs,⁴⁰ and thus nitrogen fixation and removal by soybeans were not included in the NMBR model. Atmospheric deposition contributes substantial nitrogen to the Chesapeake Bay as a whole,²¹ but it is a small fraction (4%) of the total load in its agricultural watersheds.²⁰ For this reason, and because there were no available data for how atmospheric loadings have increased during the 20th century, the atmospheric deposition load was assumed to be negligible in C_{ag} in eq 1, but was considered to be the main contributor of nitrate that accounts for C_{na} . C_{na} was given the value of 0.15 mg/L, a typical value from wells located in the study area in either forests or wetlands (see SI, Figure S-2). Watersheds that covered multiple counties were weighted by the fraction of the watershed occurring in each county. The use of inorganic fertilizer and poultry manure has increased several fold since World War II, but the quantity applied on the peninsula has stabilized in the last few decades.^{36,37} This increase in fertilizer use has been linked to the increases in nitrates seen in the stream concentrations on the peninsula.^{41,42} Details of the fertilizer data are provided in the SI.

The simulated nitrate concentrations for the streams and wells were compared with observed concentrations between the years 1961 and 2012 that were combined into multiyear average values for the purpose of the parameter optimization. In order to attempt to account for improvements in fertilizer management practices that have been occurring over the last few decades, and to see whether or not such improvements were detectable in the data, one additional parameter, E_{time} (t^{-1}), was included, wherein both uptake efficiencies, E_f and E_m , were multiplied by a value that increased linearly from zero to E_{time} between the year 1970 and 2000. These three fertilizer uptake parameters and three denitrification parameters (D_g , D_r , and D_b) were adjusted until a best fit was obtained between the simulated and observed concentrations. The best fit parameters were used along with eqs 1 and 2 to all of the watersheds draining the Delmarva Peninsula to the Bay to calculate of the total annual load of nitrate in base flow. The total dissolved nitrogen (TDN) loading to the Bay over time was then estimated by adding observed dissolved organic nitrogen (DON) values to the base-flow and high-flow concentrations, which were then multiplied by their corresponding flow rates (see below).

RESULTS

Base-Flow Age Distribution. The groundwater discharging to the streams in the seven watersheds used for nitrate calibration in this study (Figure 1) had simulated ages that ranged from <1 year to centuries, with median ages ranging from 20 to 40 years (Table 1). The cutoff between base flow and high flow in Table 1 was defined as the streamflow rate at which the nitrate concentration in the stream began to decrease with increasing flow rate (see SI, Figures S-10, S-11). The groundwater age distributions are markedly older than previously estimated for the more western regions of the Chesapeake Bay Watershed (Table 1, Figure 2), which have terrains dominated by fractured-rock with relatively thin overburdens and lower

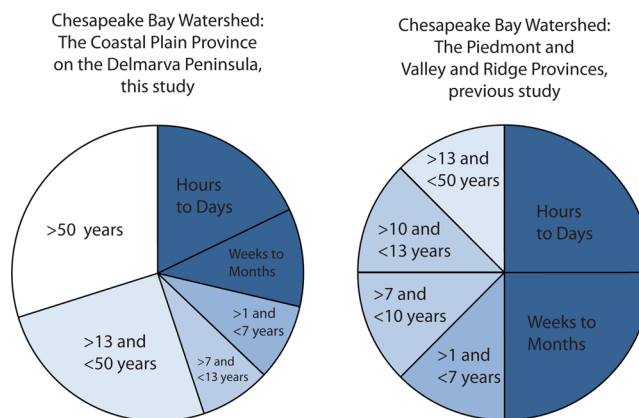


Figure 2. Estimated distribution of base-flow age for the Chesapeake Bay watershed on the Maryland and Delaware sections of the Delmarva Peninsula based on a groundwater-flow (GWF) model of the region,²² compared to earlier estimates for the Chesapeake Bay watershed¹⁴ that were from data in the Piedmont and Valley and Ridge Provinces west and north of the Bay.

bedrock porosities. The earlier age distribution estimate was made from a study⁴³ that only sampled CFCs in springs, less than 5% of which were from the Coastal Plain Province, and none of which were east of the Bay. Concentrations of CFCs in springs are particularly difficult to interpret⁴⁴ because they represent a nonlinear mixture of ages and can contain CFCs from small point contaminations that are undetectable yet can bias the interpreted age to appear too young. Greater than 50% of the groundwater discharging to streams is older than 13 years in the current study, compared to less than 15% being older than 13 years in the earlier study.^{6,43} The GWF model results indicated that the spatial distribution of groundwater return times across the Peninsula is highly correlated to the stream network,²² as recharge close to the streams has a relatively quick return time compared to recharge closer to the watershed divides.

NMBR Model Calibration. At the start of the NMBR equation calibration only two parameters were estimated, and then additional parameters were added⁴⁵ until finally six were estimated (Table 2). The sum of squared weighted residuals for each regression continued to decline as each additional parameter was added. The standard error of regression also declined, indicating that the additional parameter contributed significantly to the fitting process.⁴⁶ The initial regression included only the fertilizer and manure uptake efficiencies with no denitrification. For this case the optimal values for the fertilizer and manure uptake efficiencies were calculated to be 86 and 75%, respectively. The soil-zone and riparian denitrification terms were added individually and then together, with the combined optimal exponents being 0.554 and -0.14 , respectively. The soil-zone term calibration was based on a soil-drainage classification rank between 1 and 6, where a value of 1 (a very poorly drained soil) resulted in about 45% denitrification and a value of 6 (a very well drained soil) in 0% denitrification. The riparian denitrification term was a function of the area of the watershed where an equivalent distance of travel along a stream resulted in about 10% denitrification in the first 3 km, and about 50% denitrification after 30 km. The parameter for groundwater denitrification, D_g , was estimated to be close to zero, but in situ is likely to have a small finite value. The near-zero value is consistent with the well-oxygenated waters

Table 2. Best-Fit Values of Parameters and Their Sensitivities for the Nitrogen Mass-Balance Regression (NMBR) Equation^a

regression number	fertilizer uptake efficiency pre-1970, E_f	manure uptake efficiency pre-1970, E_m	percent increase in uptake efficiencies 1970–2000, E_{time}	fertilizer uptake efficiency post-2000, E_f	manure uptake efficiency post-2000, E_m	riparian and stream loss exponent for riparian denitrification, D_r	unsaturated zone (soil) loss exponent for soil denitrification, D_s	rate of loss in the saturated zone, in mg per liter per year, D_g	number of parameters estimated	sum of squared weighted residuals	standard error of regression	R-squared value for observed versus simulated temporal stream data ^b	slope of best fit line for observed temporal stream data ^c
1	86%	75%	0	86%	75%	0	0	0	2	8987	130	0.774	0.672
2	81%	61%	0	81%	61%	0	1.17	0	3	6074	88	0.920	0.886
3	77%	54%	0	77%	54%	-0.129	0	0	3	3926	57	0.877	0.751
4	74%	36%	0	74%	36%	-0.14	0.554	0	4	2529	37	0.929	0.906
5	66%	40%	23%	81%	49%	-0.117	0.572	0.00	5	2173	32	0.959	0.894
10% upper parameter value limit ^c	73%	48%	42%	NA	NA	-0.103	0.86	0.19	5	2390	40	NA	NA
10% lower parameter value limit ^c	62%	27%	5%	NA	NA	-0.143	0.35	0.00	5	2390	40	NA	NA
10% limits as percent of value	8%	26%	80%	NA	NA	17%	45%	NA	5	2390	40	NA	NA

^aSee SI for definition of the nitrate-loss parameters in the NMBR equation. NA = not applicable. ^bMorgan Creek, Nanticoke River, and Choptank River data. ^cIndicates the highest or lowest value of the parameter that will not cause the sum of squared weighted residual to exceed 10% of the minimum value when the other parameters are allowed to vary.

present in most of the shallow Delmarva, and in situ denitrification of this type is known to be occurring in other localities in the Mid-Atlantic Coastal Plain.⁴⁷

Three watersheds in particular: Morgan Creek, Choptank River, and Nanticoke River have base-flow nitrate observations that cover several decades (Figure 3). Fourteen of the 25 total observations used in the parameter estimation were multiyear average concentrations from these three watersheds. The NMBR eqs 1 and 2 were used to estimate the nitrate concentrations in these rivers over time using the four optimized parameter values E_f , E_m , D_s , and D_r (D_g set to zero). The differences between the simulated and observed multiyear concentrations averaged 5, 8, and 12% for Morgan Creek, Choptank River, and Nanticoke River, respectively (Figure 3). Given denitrification and uptake efficiencies vary spatially, exact matches between simulated and observed values for all three watersheds with a single set of parameters were not expected. The objective of this study, however, was to quantify the total nitrogen loading to the Bay and its transient response to changes in nitrogen loading to the water table, and thus only one set of best-fit parameters was estimated and used in the final load calculation.

The last parameter, E_{time} , was estimated to account for the potential effects of previously implemented nutrient management practices that might be reducing the amount of nitrate reaching the water table. The result of including E_{time} was that a new better fit was obtained by allowing the uptake efficiencies to improve by 23% (Table 2). The final model had uptake efficiencies, E_f and E_m , of 66 and 40% before 1970 and 81 and 49% after 2000, with a linear increase applied in between. These estimated uptake percentages are in general agreement with nitrogen budgets for agricultural regions.⁴⁰ The resulting effect on the simulation was that the nitrate concentrations in the streams began to plateau in the 1990s and 2000s to a greater extent than they would without this improvement (Figure 3). An uncertainty analysis (Table 2) indicates the estimated value of E_{time} was substantially less certain than the estimates of E_f and E_m .

Chesapeake Bay TDN Load Estimate for 2009. In order to estimate the TDN load to the Bay (and compare with current USEPA estimated and target loadings), the calibrated NMBR equations were applied to the 41 HUC-11 watersheds that comprise the section of the Peninsula that drains into the Chesapeake Bay. The mean high flow rate was estimated in each HUC-11 watershed by using the linear relationship that was observed in the MODFLOW simulations between the percent of streamflow that is rejected recharge and the observed percent of streamflow in the streams that exceeded the nitrate base-flow cutoff value (SI, Figure S-11). The mean high-flow nitrate concentration was estimated to be 65% of the base-flow concentration, a value consistently observed in the streams (SI). Total dissolved organic nitrogen (TDON) loads were added to the base-flow and high-flow nitrate loads to obtain estimated TDN loads for the HUC-11 watersheds. DON values of 0.37 and 0.63 mg N per liter were used, which were the observed means of several streams on the peninsula in manure poor and rich regions, respectively. Dissolved ammonia values were not included as they represent at most only a few percent TDN concentrations (SI, Figure S-3). The fraction of the total groundwater discharge that is occurring directly to the Bay along the shoreline or tidal estuaries has been shown to quite small (<0.05),⁴⁸ and thus this study includes only groundwater discharge to nontidal streams in the total load calculations.

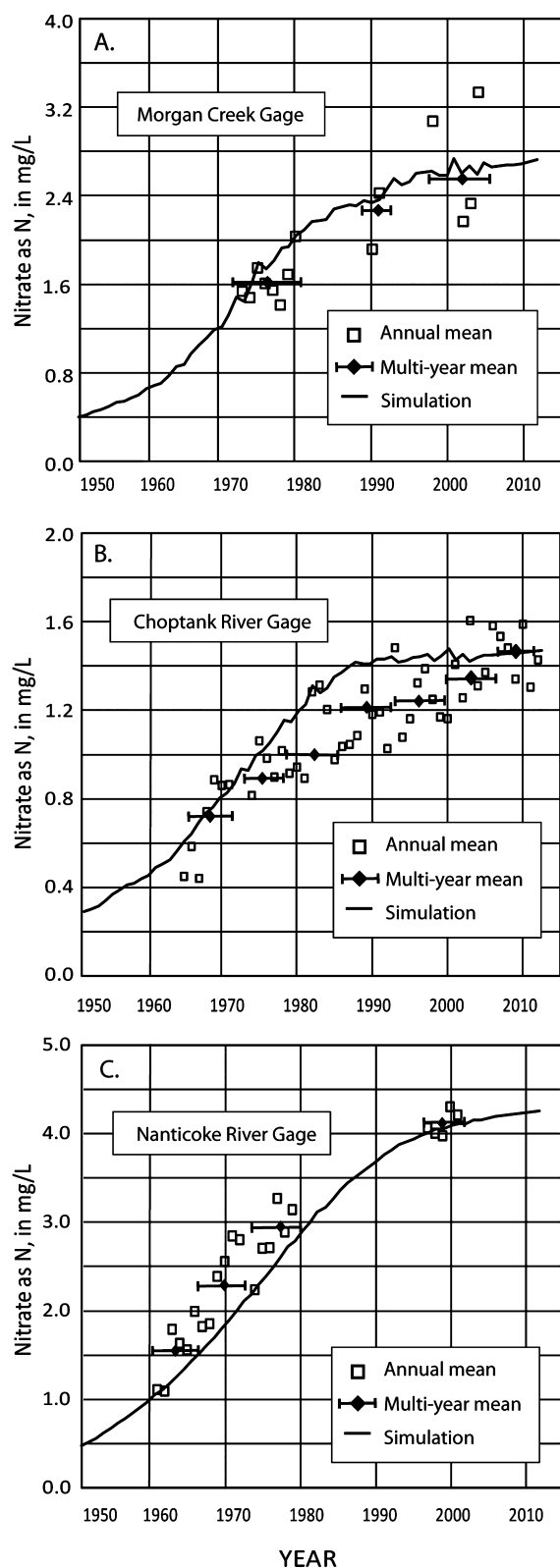


Figure 3. Observed nitrate concentrations in base flow at (A) Morgan Creek near Kennedyville, MD, (B) Choptank River near Greensboro, MD, and (C) Nanticoke River near Bridgeville, DE, and simulated values using the calibrated parameters of the nitrogen mass-balance regression (NMBR) model.

The final estimated TDN load to the Chesapeake Bay from the Delmarva Peninsula study area was 6400 t for 2009 (Figure 4). USEPA reported an estimated total stream TN load for this

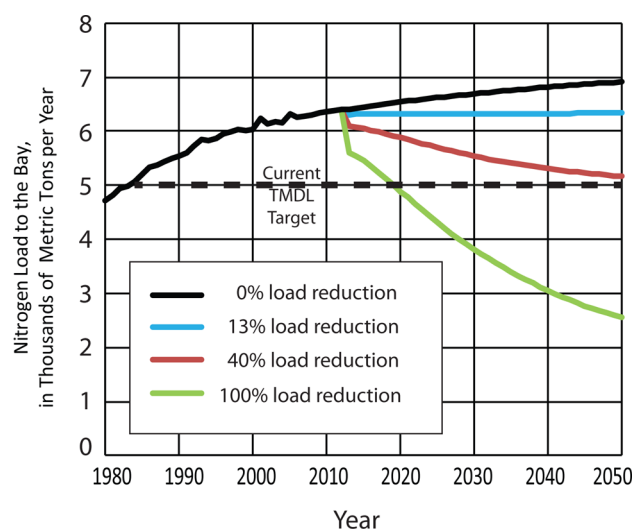


Figure 4. Forecast of total dissolved nitrogen (TDN) loading to the Chesapeake Bay from total streamflow from the Delmarva Peninsula study area based on the nitrogen mass-balance regression (NMBR) model that incorporated the simulated distribution of groundwater return times from the groundwater-flow (GWF) model. The dashed horizontal line represents the approximate 25% reduction TMDL target for this region proposed by the U. S. Environmental Agency in conjunction with the local states.⁴⁹

study region in 2009 of 17 million pounds (7700 t).⁴⁹ The USEPA estimate may be slightly higher than the NMBR model estimate for a few reasons, most likely because the NMBR watersheds had no point sources of nitrogen, such as urban or wastewater-treatment plant sources, and did not account for suspended particulate nitrogen (TN versus TDN). TN data were not available in sufficient quantity on the Delmarva to include in the NMBR model, and those that do exist are very close to TDN values. The magnitude of the difference between the EPA and NMBR 2009 load estimate is consistent with these differences in sources and the measured nitrogen data used.

Chesapeake Bay TDN Load Future Forecast. The future TDN total streamflow load forecast to the Chesapeake Bay from the study area using the NMBR model included all six calibrated parameters and a constant future application rate of fertilizer and poultry manure equal to the average rate for 2008–2012. Given this scenario, this TDN load is predicted to continue to rise to almost 7000 t by the year 2050 (Figure 4). This future rise is caused by the lag in the groundwater response time—low-nitrate old groundwater currently discharging into the streams will no longer be low in nitrate as time progresses. Thus, if there is a zero percent load reduction of nitrogen to the water table, the nitrogen load to the Bay is forecast to continue to rise by 13% by 2050 relative to the 2012 load. The NMBR model was also used to forecast future TDN loads to the Bay if nitrogen reductions to the water table are made after 2012. Conversely, a load reduction of 13% to the water table is required to cause the TDN load to the Bay to remain constant into the future at the 2012 level. A load reduction at the water table of 40% would cause the TDN load to the Bay to decrease down to about 5000 t by the year 2050. Similarly a complete removal of nitrogen entering the water Table (100% load reduction) would cause the TDN load to decrease down to about 5000 and 2500 t by the years 2020 and 2050, respectively. A sensitivity analysis on how the estimated parameters affect the model forecasts was performed and the results are

described in the SI (Figure SI-17). Nearly all of the parameters affect only the total load to the Bay being estimated, and not the response time of the system. In addition, uncertainty in input data such as fertilizer loading would affect only the parameters (such as the uptake efficiencies) that control the magnitude of the estimated load and not the temporal effect of the groundwater lag times.

■ DISCUSSION

The USEPA, together with the states, have made target TMDL goals and reduction goals for the Bay. These goals may be adjusted in the future, but currently the reduction goal for the Maryland and Delaware portions of the Delmarva Peninsula is approximately 25% of the 2009 load, which would correspond to about 5000 t TDN per year by 2020.⁴⁹ This value is not the load the Bay would be receiving in 2020, but only what would ultimately lead to a load of 5000 t TDN by having a certain amount of BMPs implemented by 2020. The current Chesapeake Bay HSPF model,⁸ which is being used by the USEPA to calculate these load reduction targets, or total maximum daily load (TMDL) requirements, bases its calculations of stream loadings from the spatial regression model SPARROW.^{20,21} It does not consider any groundwater lag times or other transient loading effects. It only predicts what the final reduction in load to the Bay would be given the implementation of BMPs and their corresponding anticipated effects. The forecasts in this study show reduced nitrogen loading to the water table takes decades to be fully observed in streams. Given that a 13% reduction in load to the water table is required to maintain the current load to the Bay, a 25% load reduction to the water table would ultimately only lead to a 12% load reduction to the Bay. Although the USEPA is aware of the potential effects of groundwater lag times, the magnitude of these effects have not yet been quantified or accounted for. The forecasts in this study, based on the best estimates of the groundwater conditions on the peninsula, indicate several decades will be required to flush out the groundwater reservoir to the extent that the targeted reductions could be realized.

Other aspects of the results of this study suggest that nutrient management practices, implemented over the past decade especially, have begun to work and, thus, could continue to work in the future as they are expanded. If the parameter E_{time} is set to zero (no effect from nutrient management so far), the model predicts the current load to the Bay would be 8200 rather than 6400 t. So although the TDN loads are still currently rising, this study suggests they are not at the level they could have been if uptake efficiencies had not been improving. Also, some of the most effective practices, such as the use of cover crops, have been implemented mostly within the last several years.⁵⁰ This more recent effect may not be fully observed yet in the data, and thus does not yet appear in the NMBR model forecast. The most likely variable that might cause the NMBR forecast to deviate substantially (especially at more local scales) is the uncertainty in the base-flow age distributions.¹⁷ The GWF model is regional in nature and could not take into effect local aquifer heterogeneities that can affect base-flow age distributions. However, the NMBR model is designed to highlight the magnitude of the overall regional system response time, rather than to accurately predict details of future fluxes. For load reduction to the Bay, nitrogen load has only to be reduced at the water table, not the application rate to the land surface, so reductions to the Bay could be realized by improved and additional BMPs, not necessarily by

reductions in fertilizer or manure application rates. The results of this study highlight the large difference in times between USEPA's target of several years for BMPs to be in place and the many decades before these practices would lead to the desired reductions in nitrogen loading to the Bay. There are many stakeholders invested in restoring the health of Chesapeake Bay, and the delay that groundwater will cause in improvements to its water quality must be a well understood factor in its undertaking.

■ ASSOCIATED CONTENT

⑤ Supporting Information

Additional Supporting Information is available in the form of text, tables, and figures, describing in more detail the calculation methods and inputs into the GWF and NMBR models and results, including a sensitivity analysis of the nitrogen forecast to the Bay to the NMBR parameters. This material is available free of charge via the Internet at <http://pubs.acs.org>.

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Notes

The authors declare no competing financial interest.

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