

**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, *et al.*,)**

Defendants.)

Case No. 11-cv-00067

(Judge Rambo)

**MEMORANDUM OF INTERVENORS CHESAPEAKE BAY
FOUNDATION, CITIZENS FOR PENNSYLVANIA’S FUTURE,
DEFENDERS OF WILDLIFE, JEFFERSON COUNTY PUBLIC SERVICE
DISTRICT, MIDSHORE RIVERKEEPER CONSERVANCY, AND
NATIONAL WILDLIFE FEDERATION IN OPPOSITION TO
PLAINTIFFS’ MOTION FOR SUMMARY JUDGMENT AND IN SUPPORT
OF EPA’S CROSS-MOTION FOR SUMMARY JUDGMENT**

TABLE OF CONTENTS

TABLE OF AUTHORITIES.....	ii
INTRODUCTION	1
BACKGROUND.....	2
ARGUMENT.....	9
CONCLUSION.....	30
CERTIFICATE OF COMPLIANCE.....	32
CERTIFICATE OF SERVICE.....	33
Index of Exhibits.....	35

TABLE OF AUTHORITIES

Cases

American Canoe Ass'n v. United States EPA,
30 F. Supp. 2d 908 (E.D. Va. 1998)..... 15

American Canoe Ass'n v. United States EPA,
54 F. Supp. 2d 621 (E.D. Va. 1999)..... 15, 16

Chemical Mfrs. Ass'n v. EPA, 28 F.3d 1259 (D.C. Cir. 1994)..... 25

Citizens to Preserve Overton Park, Inc. v. Volpe,
401 U.S. 402 (U.S. 1971)..... 10

Environmental Defense Fund, Inc. v. Costle,
657 F.2d 275 (D.C. Cir. 1981)..... 15

Ethyl Corp. v. EPA, 541 F.2d 1 (D.C. Cir. 1976)..... 10

Friends of the Earth v. EPA, 446 F.3d 140 (D.C. Cir. 2006)..... 15

Friends of the Earth, Inc. v. Laidlaw Env'tl. Servs. (TOC), Inc.,
528 U.S. 167 (U.S. 2000)..... 12

Lujan v. Defenders of Wildlife, 504 U.S. 555 (U.S. 1992)..... 13

Public Citizen Health Research Group v. Tyson,
796 F.2d 1479 (D.C. Cir. 1986)..... 29

Scott v. Hammond, 741 F.2d 992 (7th Cir. Ill. 1984)..... 16

United States v. Students Challenging Regulatory Agency Procedures,
412 U.S. 669 (U.S. 1973)..... 13

Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.,
435 U.S. 519 (U.S. 1978)..... 10, 11, 19

Statutes

5 USCS § 706.....	10
33 USCS § 1267.....	17, 29
33 USCS § 1313.....	15, 29
33 USCS § 1342.....	9, 13

Regulations

40 CFR § 130.7.....	14, 19
40 CFR § 122.4.....	15

INTRODUCTION

Plaintiffs, an amalgam of agricultural and home building lobbyists, seek to abolish scientifically developed limits on pollution that is destroying the Chesapeake Bay. They ask the Court to set aside the Chesapeake Bay Total Maximum Daily Load (“Bay TMDL”) created by U.S. EPA in collaboration with the states of Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia, and the District of Columbia. EPA and these jurisdictions spent decades trying to reach consensus on the appropriate levels of pollution that may be discharged to the Bay from a vast network of tributaries.

The United States has filed an opposition and cross-motion for summary judgment.

Plaintiffs’ challenge rests on three arguments: EPA did not have the authority to issue the TMDL; the public was not granted sufficient opportunity to review and comment on the TMDL; and the TMDL is based upon flawed computer modeling and input data. Each of these arguments is bereft of factual and legal support. Thus, Intervenors ask the Court to uphold the last chance for Bay survival and deny the Plaintiffs’ motion and grant the motion of the United States.

BACKGROUND

Plaintiffs would have the Court believe that the Bay TMDL was created by executive fiat and is not supported by any of the six states, local jurisdictions, and millions of citizens who call the watershed home. Plaintiffs present a distorted view of reality. It took decades of dedication and tireless effort by public and private scientists, state and federal employees, citizens and stakeholders to develop the Bay TMDL. EPA's obligation to develop the Bay TMDL is established by six forms of legally binding authority. In fulfilling that obligation, EPA held hundreds public meetings throughout the watershed to discuss development of the TMDL and to hear public concerns. To fully understand the justification for and historical development of the Bay TMDL, one must comprehend the ecological, economic, and cultural significance of the Chesapeake Bay and the causes of its poor water quality.

I. The Bay TMDL Was Created to Restore and Preserve a Unique Natural Resource

A. Bay Geography And History

The Chesapeake Bay ("the Bay") is North America's largest and most biologically diverse estuary, home to more than 3,600 species of plants, fish and animals.¹ The Bay watershed – the land area that contributes water to the Bay - covers 64,000 square miles from Cooperstown, New York to Virginia Beach,

¹ <http://www.chesapeakebay.net/discover/bay101/facts>

Virginia. Portions of the watershed are found in Delaware, Maryland, New York, Pennsylvania, Virginia, Washington, D.C., and West Virginia. *Id.* A national treasure, for more than 300 years the Bay and its tributaries have sustained the region's economy and defined its traditions and culture.² It is a resource of extraordinary value, worthy of the highest levels of protection and restoration.³

B. Poor Water Quality is Destroying the Bay

Most of the Bay and its tidal waters are listed as impaired because of excess nutrients (nitrogen and phosphorous) and sediment.⁴ These pollutants cause algae blooms that, as they decay, consume oxygen and create “dead zones” where fish and shellfish cannot survive, block sunlight that is needed for underwater grasses, and smother aquatic life on the bottom.⁵ High levels of nutrients and sediment enter the water from agricultural operations, urban and suburban stormwater runoff, wastewater facilities, air pollution, and other sources. Despite some reductions in pollution during the past 25 years, there has been insufficient progress toward meeting the water quality goals for the Bay. AR0000018.

² Congress has recognized that the Chesapeake Bay as a “national treasure and resource of worldwide significance.” [Chesapeake Bay Restoration Act of 2000, Nov. 7, 2000, P.L. 106-457, Title II, § 202, 114 Stat. 1967.](#)

³ *Chesapeake 2000* agreement, http://www.chesapeakebay.net/documents/cbp_12081.pdf

⁴ <http://www.chesapeakebay.net/issues> . See also Chesapeake Bay Report Card, 2011, UMD Center for Environmental Sciences, <http://ian.umces.edu/ecocheck/report-cards/chesapeake-bay/2011/>

⁵ <http://www.chesapeakebay.net/issues/issue/nutrients#inline>; <http://www.chesapeakebay.net/issues/issue/sediment#inline>.

1. The Bay's Natural Resources Have Suffered

As water quality in the Bay and its tributaries has degraded, major components of the ecosystem have been compromised. Specifically, the amount of underwater grasses essential to the sustainability of crab and fish populations declined.⁶

Underwater grasses or submerged aquatic vegetation are a key indicator species of water quality in the Bay.⁷

Underwater grasses provide food and shelter to a variety of Bay residents including crabs, fish, and waterfowl. Underwater grasses also improve Bay water quality by generating oxygen as a part of photosynthesis. Most importantly, they utilize nutrients like nitrogen and phosphorous as they grow.⁸ For underwater grasses to grow the water must be clear enough to allow sunlight to reach the bottom. Pollution from stormwater run-off has reduced the growth of underwater grasses in the Bay. This run-off also carries nutrients, providing fuel for increased algae growth which also blocks sunlight.⁹

The total acreage of Bay grasses stands at approximately 43% of the restoration goal set in the *Chesapeake 2000* agreement. Bay Barometer 2010, p. 6.¹⁰ Without

⁶ http://www.chesapeakebay.net/issues/issue/bay_grasses#inline

⁷ <http://www.chesapeakebay.net/baygrasses.aspx?menuitem=14621>

⁸ *Id.*

⁹ *Id.*

¹⁰ http://www.chesapeakebay.net/documents/cbp_59306.pdf

improved water quality, underwater grass acreage will continue to remain diminished in the Bay and its rivers leading to further losses of crabs and fish.

Poor water quality has also contributed to a dramatic loss of oysters.¹¹ The oyster population in the Bay has been estimated at between 1% and 4% of its historic numbers.¹² In addition to their commercial and recreational value, oysters are critical to improving the water quality because they are filter feeders. An individual adult oyster can pump almost 50 gallons of water a day through its gills which strain out food and pollutants.¹³

Menhaden fish are also filter feeders and act as Bay cleansers. Menhaden are a primary source of food for fish like striped bass and birds like bald eagles and ospreys.¹⁴ Unfortunately, poor water quality harms menhaden by altering their prey and limiting oxygen available for them to survive.

The Bay blue crab comprises one of the most valuable commercial and recreational fisheries in the Bay. Blue crabs are a critical link in the Bay food web serving as predators and prey for striped bass.¹⁵ Unfortunately, low oxygen caused by pollution drives blue crabs from their preferred habitat and kills many of the small bottom organisms on which the blue crabs feed. In 2010, 62% of the Bay

¹¹ <http://www.chesapeakebay.net/nutrients.aspx?menuitem=14690>.

¹² http://www.chesapeakebay.net/documents/cbp_59306.pdf at p. 8.

¹³ <http://www.chesapeakebay.net/oysters.aspx?menuitem=19368>

¹⁴ <http://www.chesapeakebay.net/atlanticmenhaden.aspx?menuitem=19375>

¹⁵ <http://www.chesapeakebay.net/bluecrab.aspx?menuitem=19367>.

had levels of dissolved oxygen below that established by EPA as sufficient for healthy aquatic life.¹⁶

The numbers of blue crabs within the period between 1997 and 2008 were not sustainable. *Id.* In response, members of Congress from Maryland and Virginia requested a federal fisheries disaster declaration for the Bay. The Secretary of Commerce granted that request on September 22, 2008.¹⁷ While fishing pressure was a factor in low population numbers, poor water quality was a contributing factor.

In 2010, only 18% of the Bay had acceptable water clarity.¹⁸ Poor water clarity is caused by sediment pollution and algae blooms generated by nutrient pollution. Limited water clarity has reduced the amount of underwater grasses necessary to protect juvenile crabs, molting crabs, and adults from predation.

In sum, until water quality improves, Bay natural resources will not improve.

2. Poor Water Quality Continues to Harm The Bay Waterman and Recreational Fishing

Since colonial times, a unique water borne harvester known as a “waterman” has collected the Bay’s bounty. The culture and fishing practices of the waterman have been handed down from generation to generation for over 300 years. *See* W. Warner, *Beautiful Swimmers*, Back Bay, 1976.

¹⁶ *See* fn 10 at p. 5.

¹⁷ http://www.noaanews.noaa.gov/stories2008/20080923_bluecrab.html

¹⁸ *Id.*

Watermen harvest many species of seafood from the Bay in different seasons of the year. In any given year, a Bay waterman may harvest blue crabs in the summer months, oysters in the fall, striped bass and perch in the winter months and either eels, catfish, yellow perch or soft shell calms in the spring and back to crabbing in the summer.¹⁹

As the Bay's bounty has diminished it has become increasingly difficult make a living on the water. The number of full time commercial watermen has dramatically declined since the mid-1900s. For example, in 1993 there were 3,858 commercial watermen in Virginia. Today, there are 2,980. Although overharvesting has contributed to their plight, poor water quality has caused and continues to cause the greatest harm to commercial and recreational fishing.²⁰

In response to the lack of income, many watermen are leaving their way of life to work on tug boats or as prison guards far from their families. Due to our collective inability to resolve Bay water pollution, a way of life and a valuable commercial and cultural resource is disappearing, perhaps forever.²¹

The impact of poor water quality has been equally felt by recreational fishermen and the sport-fishing industry. Without sustainable fisheries, food, and habitat, the sport-fishing industry and recreational fishing upon which it depends

¹⁹ https://marylandwatermen.com/Watermen_of_the_Bay.html

²⁰ <http://www.pbs.org/wgbh/pages/frontline/poisonedwaters/view/>

²¹ *Id.* See also, *Last Boat Out* <http://www.lastboatout.com/index.html>

are harmed. The revenues derived by the states from recreational fishing licenses and taxes on gear and related expenses are significant. As sport-fish stocks decline, so do public revenues associated with sport-fishing and private sales of sport-fishing gear.

C. Poor Bay Water Quality Is Not The Problem Of Just One State

The Bay watershed is located within five states and the District of Columbia.²² Thus, nutrients that enter Lake Otsego in Cooperstown, NY, for example, flow into the Susquehanna River and can harm water quality in the Chesapeake Bay hundreds of miles away.²³ This scenario is applicable to every tributary within 64,000 square miles. Thus, the problem is immensely complex and the solution offered by the Plaintiffs – leave it to the states - is not realistic. Due to the fact that the pollution is generated in six different jurisdictions, no one state can address the problem as Maryland, for example, cannot direct Pennsylvania to limit its pollution. The states and EPA acknowledged this fact when they signed the first Bay Agreement in 1983 and jointly participated in the development of the Chesapeake Bay Watershed and Water Quality Models to assign pollutant loads for waters within their respective jurisdictions.²⁴

²² AR0000019; AR0000069, Figure 2-2.

²³ The Susquehanna River contributes 46% of the nitrogen, 26% of the phosphorous, and 33% of the sediment loads to the Chesapeake Bay. AR0000112

²⁴ AR0005488; AR0000055-56; AR0000426 , Exhibit A.

Should the Bay TMDL be vacated, there will be an adverse impact on Bay health and the economy it supports. If the Court determines that EPA does not have the authority to issue the Bay TMDL and vacates the allocations, EPA's only remaining authority is to further restrict point sources subject to NPDES permits. [33 U.S.C. § 1342](#). Such a result could have two different adverse impacts. First, it is not clear that restrictions on point sources alone will achieve full Bay restoration. Wastewater treatment plants, for example, do not discharge sediment. Thus, the sediment goals would not be achieved. Moreover, most significant wastewater dischargers in the Bay watershed have already installed pollution reduction equipment that greatly reduces the amount of nitrogen and phosphorous discharged.²⁵ Hence, even if stricter permit limits were imposed on those sources, gains would be minor. In addition, the extent of those limits is restricted by the current state of technology. Second, the cost of installing equipment necessary to meet more stringent point source limits would likely greatly exceed the incremental reductions in pollution gained by its installation. *Id.*

ARGUMENT

Intervenors concur with the arguments presented by the United States in response to Plaintiffs' motion and in their cross-motion for summary judgment. However, there are other issues the Court should consider.

²⁵ The term "significant" refers to facilities that discharge 0.5 million gallons per day or greater. AR0021480 at 21490-91 (POTW costs).

I. Standard of Review

Review under the Administrative Procedure Act (APA) is pursuant to an “arbitrary and capricious” standard. [5 U.S.C. § 706\(2\)\(A\)](#). This standard of review is highly deferential to the agency. [Ethyl Corp. v. EPA, 541 F.2d 1, 34 \(en banc\), cert. denied, 426 U.S. 941 \(1976\)](#), and presumes the validity of agency action, [Citizens to Protect Overton Park, Inc. v. Volpe, 401 U.S. 402, 419 \(1971\)](#). The party challenging the agency action bears the burden of overcoming the presumption. Review is narrow and forbids a court from substituting its judgment for that of the agency. *Id.* at 416.

Plaintiffs offer no standard for review of their APA allegations; EPA failed to provide sufficient public notice and EPA’s decision to rely upon the Chesapeake Bay Watershed Model (CBWM) and allegedly flawed input data was arbitrary and capricious. However, they later attempt to bootstrap additional procedural requirements on to EPA: EPA should have provided more than 45 days²⁶ for public comment and EPA should have abandoned the CBWM because it purportedly conflicts with other models. *Id.* at 23, 45, and 54.

The Supreme Court has held that a reviewing court may not impose additional procedural rules upon an agency. [Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 543 \(1978\)](#)(Absent constitutional constraints or extremely

²⁶ Plaintiffs do not state what the appropriate time period for public notice should have been.

compelling circumstances the "administrative agencies 'should be free to fashion their own rules of procedure") (citations omitted). Plaintiffs have not suggested that either constitutional constraints or extremely compelling circumstances required EPA to do more in developing the Bay TMDL. Thus, EPA was free to fashion its own rules for public notice and comment. As is discussed in greater detail below, and in the Government's brief, EPA provided more than basic notice and comment when it developed the Bay TMDL.

On review, the Court must simply determine if EPA provided notice and comment in accordance with the APA and the TMDL regulations. As the *Vermont Yankee* court held:

there is no basis for a "court to review and overturn a rulemaking proceeding on the basis of the procedural devices employed (or not employed) by the [agency] so long as the [agency] employed at least the statutory *minima*....

[Id. at 548.](#)

II. Plaintiffs' Alleged Injuries Are Not Imminent And Do Not Have A Sufficient Nexus To The Bay TMDL To Confer Standing

The United States has argued that Plaintiffs have failed to establish standing sufficient to confer jurisdiction. The Government contends that because the Plaintiffs have not provided affidavits establishing the elements of representational standing their complaint should be dismissed. [United States Br. at 25-27.](#)

There are two other aspects of standing which Plaintiffs have failed to meet: a causal connection between the alleged injury and the conduct complained of and the injury is imminent. [*Friends of Earth, Inc. v. Laidlaw Environmental Services, Inc.*, 528 U.S. 167, 180-181 \(2000\)](#). That is, even if Plaintiffs can satisfy the requirements for representational standing, they cannot establish a nexus between the alleged injury and EPA's conduct.

In their complaints, Plaintiffs allege that their members who already have point source permits or may be required to obtain such permits will be adversely affected by the TMDL because it will require more stringent permit limits or limit their ability to obtain a permit. [AFBF Complaint ¶¶ 8, 11, and 13 – 17](#); [NAHB Complaint ¶¶ 12, 13, 15, 16](#). The Fertilizer Institute alleges that reduced nitrogen and phosphorous loads assigned to Bay tributaries may reduce fertilizer sales. AFBF Complaint ¶ 12. Even if these events were to happen it would be due to the state's decision to implement the TMDL in that fashion pursuant to state law, not due to the Bay TMDL.

In paragraphs 9, 11, and 13 -17 of their complaint, the agriculture groups allege that farm members will be adversely affected because the TMDL assigns loads to point sources and non-point sources. However, it is impossible to determine whether a load assigned to one of 92 bodies of water will have any impact on a specific farm. That level of detail is reserved to the states to establish through their

Watershed Implementation Plans (WIPs).²⁷ Thus, the alleged injury may not be caused by the Bay TMDL but, by the state implementation plans.

Plaintiffs must show that the Bay TMDL will cause imminent injury. [*Lujan v. Defenders of Wildlife*, 504 U.S. 555, 564 \(1992\)](#). Although the concept of imminence is elastic, the concept is “stretched beyond the breaking point when ... the plaintiff alleges only an injury at some indefinite future time,” *Id.* Here, Plaintiffs allege that at some point in the future they may be required to obtain a CWA point source permit because the Bay TMDL limits the amount of pollution a body of water may receive. However, because each of the states subject to the Bay TMDL will determine how they will meet the pollution limits via their WIPs it is uncertain when, if ever, a particular farm may need to obtain a permit. Such speculation fails to satisfy the imminent injury standard. Moreover, it is not the Bay TMDL that would require a permit; point source permits will be adjusted or required pursuant to state law. [33 U.S.C. § 1342](#).²⁸

As the Supreme Court has recognized “pleadings must be something more than an ingenious academic exercise in the conceivable.” [*United States v. SCRAP*, 412 U.S., 669, 688-89 \(1973\)](#). (“A plaintiff must allege that he has been or will in

²⁷ AR0000008-9.

²⁸ Each state subject to the Bay TMDL has been authorized by EPA to administer the NPDES permitting program within their respective jurisdictions. <http://cfpub.epa.gov/npdes/statestats.cfm> EPA administers the program in the District of Columbia. *Id.* However, there are no significant agricultural point sources in the District.

fact be perceptibly harmed by the challenged agency action, not that he can imagine circumstances in which he could be affected by the agency's action.”)

Here, Plaintiffs cannot identify a verifiable injury their members could face due to the fact that EPA has allocated pollution limits to certain bodies of water.

As the Plaintiffs admit, a TMDL is nothing more than a number. [AFBF Complaint ¶ 29](#). Plaintiffs assert that EPA may not implement the TMDL, only the states can. [Plaintiffs' Br. at 25-35](#). Thus, Plaintiffs admit that issuance of the Bay TMDL may not directly injure their members. Hence, they lack standing

In addition, there are no public notice procedures for creation of a TMDL other than those set forth in [40 C.F.R. § 130.7\(c\)\(1\)\(ii\)](#) – “Calculations to establish TMDL’s shall be subject to public review as defined in the State [Continuing Planning Process].” As is explained below, EPA provided the public with such review. Thus, with respect to their public notice and comment claims, Plaintiffs cannot establish an injury in fact.

III. EPA Was Legally Authorized to Issue the Bay TMDL

Despite Plaintiffs’ claims, EPA was authorized to issue the Bay TMDL and its authority to issue the Bay TMDL exceeds the authority granted for the typical TMDL. As the United States notes, EPA was authorized to issue the Bay TMDL by statute, interstate compacts, judicial consent decrees, a binding settlement agreement, and an Executive Order. Intervenors agree with the United States’

response to Plaintiffs' motion in this regard.²⁹ However, there are additional facts supporting the government's position.

While states are required to develop TMDL's, [33 U.S.C. § 1313\(d\)\(1\)\(C\)](#), if states fail to perform their duties, EPA is generally required to perform them on the states' behalf. [33 U.S.C. § 1313\(b\), \(d\)\(2\)](#); [American Canoe Ass'n v. EPA, 30 F. Supp. 2d 908, 912 \(E.D. VA 1998\)](#). Many states failed to develop TMDL's as required by the Act. Virginia was such a state and citizens sued EPA to develop TMDL's for Virginia waters including Virginia's portion of the Bay. *Id.*

Here in support of the Bay TMDL, Defendant Intervenor Virginia Association of Municipal Wastewater Agencies (VAMWA), intervened as a defendant and moved to dismiss the citizens' claim. *Id.* at 908. The motion was denied and EPA ultimately settled the lawsuit by entering into a detailed consent decree that set specific time frames for when EPA was to act if the state failed to designate impaired waters and develop TMDL's for those water bodies. [American Canoe Ass'n v. EPA, 54 F. Supp. 2d 621 \(E.D. VA 1999\)](#).

²⁹ We note, however, that while not directly enforceable, TMDL's are binding upon permitting authorities. New point sources may not discharge pollutants into a water body that exceeds water quality standards for that pollutant, [40 C.F.R. § 122.4\(i\)](#). TMDL's are then inserted into point source permits, taking into account nonpoint source impacts. [Environmental Defense Fund v. Costle, 657 F. 2d 275, 294 \(D.C. Cir. 1981\)](#). See also [Friends of the Earth v. EPA, 446 F.3d 140, 143 \(D.C. Cir. 2006\)](#).

When the consent decree was presented for approval, VAMWA asked the court to reject the decree. VAMWA asserted there, as Plaintiffs do here, that a consent decree that authorizes EPA to develop TMDL's on a specific schedule "wrests the initiative for establishing TMDL's from Virginia in violation of the CWA." [*Id.* at 625](#). The court held that VAMWA's argument failed. *Id.* at 626. In reaching that conclusion, the court followed the reasoning in [*Scott v. Hammond*, 741 F. 2d 992, 998 \(7th Cir. 1984\)](#), that "the CWA should be liberally construed to achieve its objectives--in this case to impose a duty on the EPA to establish TMDL's when the states have defaulted by refusal to act over a long period," [*American Canoe* at 628](#).

The court also considered whether the decree and its TMDL schedule would be unfair to third parties. The court rejected that notion holding that such parties, like Plaintiffs here, would have the opportunity to participate in the TMDL process pursuant to public notice and comment. Thus, the decree ensured reasonable fairness. *Id.* at 629.

Pursuant to *American Canoe* decree, if Virginia failed to develop a TMDL for its portion of the Bay by May 2010, EPA was to do so by May 2011. AR0012537 and 12566. On June 19, 2008, Virginia's Secretary of Natural Resources, as a member of the Principals Staff Committee, asked EPA to develop the Bay TMDL by 2010. AR0000428, Exhibit B. *See also*, AR 0000426, Ex. A. Thus, in

developing the Bay TMDL in December 2010, EPA did nothing more than act in accordance with a judicial order and the states' specific request.

In addition, EPA had signed all of the Chesapeake Bay Agreements on behalf of the United States. The 1987 and 2000 agreements required a 40% reduction in nutrient loads to the Bay. AR0000385, Exhibit C; AR0000383, Exhibit D. Those agreements were interstate compacts ratified by Congress in Section 117 of the CWA. [33 U.S.C. § 1267](#).³⁰ Thus, EPA was obligated by law to develop the Bay TMDL with the states. See AR0032705-32731.

Although Plaintiffs complain about EPA's role in the development of the TMDL allocations, it was not the one-sided affair they portray. In fact, as the government repeatedly notes, the TMDL development process was a cooperative partnership with the states fully participating in the development of the model and compromising on their respective allocations. The high level of state participation in Chesapeake Bay Program administration and development of Bay water quality standards, tributary strategies, watershed modeling, and load allocations is evident in the minutes and documents identified in links associated with TMDL Appendix C. AR0000422-452.

³⁰ Congress required the EPA Administrator to work cooperatively with the states to develop and implement plans to achieve the goals of the Bay Agreement. [33 U.S.C. § 1267\(g\)](#).

As the adage goes, the proof is in the pudding; no state has filed suit challenging the authority of EPA to issue the Bay TMDL. The states have far more at stake than Plaintiffs. If they believed EPA had exceeded its authority or withheld critical information concerning the watershed model, they would not have spent dwindling resources on developing WIPs or coming into compliance with the TMDL allocations. In fact, the states have passed legislation furthering TMDL implementation.³¹

IV. Public Notice and Comment Was Sufficient

Plaintiffs assert that the 45 public notice and comment period provided by EPA prior to issuance of the Bay TMDL was insufficient. [Plaintiffs' Br. 45](#). While EPA's formal comment period was 45 days, the public participated in the development of critical elements of the TMDL for over five years.

A review of the meetings held addressing TMDL issues and the sponsors of those meetings establishes that Plaintiffs' members had more than adequate opportunity to evaluate issues concerning the Bay model and TMDL allocations. In Virginia alone, during 2009 individuals affiliated with agriculture or homebuilder groups participated in at least 5 meetings with EPA on the TMDL.

³¹ In April 2012, Maryland passed SB 240/HB 446 which doubles the fees collected to upgrade septic systems, provide stormwater control grants, and the planting of cover crops. The legislature also passed SB 614/HB 987 requiring a stormwater utility fee and SB/236/HB 445 that requires local jurisdictions to develop land use plans that encourage growth in existing developed areas. <http://mlis.state.md.us/2012rs/billfile/SB0236.htm>

See Exhibit E, Summary of Meetings on Model Development and Attendees compiled from TMDL Appendix C, AR0000422. In addition, agriculture and home builder groups held or sponsored 26 different meetings on the TMDL throughout the watershed during the period of November 18, 2008 through November 4, 2010.

Further, EPA provided public comment in accordance with its own regulations which require that “[c]alculations to establish TMDL’s shall be subject to public review as defined in the State [Continuing Planning Process (CPP)].” [40 C.F.R. § 130.7\(c\)\(1\)\(ii\)](#). The CPPs and water quality management plans for Maryland, Pennsylvania, and Virginia provide for no more than 45 days of public notice on TMDL calculations.³² As stated above, the APA requires that an agency provide no more than minimum procedures established by the Agency. [Vermont Yankee at 548](#). That is exactly what EPA did. Thus, Plaintiffs had ample public notice.

Plaintiffs suggest that EPA alone developed the models used to determine the load allocations for the states. [Plaintiffs’ Br. 12-16](#). Such a suggestion is not

³² MD – http://www.mde.state.md.us/assets/document/cpp_071107.pdf. MD CPP recognized development of Bay TMDL, p. 12.

PA – <http://www.elibrary.dep.state.pa.us/dsweb/Get/Version-48379/394-0810-001.pdf> .

VA – <http://www.deq.virginia.gov/Portals/0/DEQ/Water/TMDL/cpp00.pdf> at pp 16 and 18.

accurate. Numerous subcommittee meetings on various modeling issues with participants from all the Bay states were held over more than five years.

AR000422-52. Those meetings were publically noticed and open to citizen participation. During those meetings team members, and citizens if they desired, discussed various issues surrounding model development and other matters designed to reach consensus on the proper allocation of nutrient and sediment loads throughout the Bay watershed. For example, the Bay Program Modeling Subcommittee held a meeting on January 11, 2005. *See* AR0000423 (Jan. 11, 2005 Modeling Subcommittee), Exhibit F. In response to that meeting, on March 3, 2005, Dr. Allen Teeter submitted a memorandum concerning a presentation made at the January meeting. AR0000423, Exhibit G. The memo discusses the various aspects of sediment transport modeling that the team should consider and how some of those considerations should be resolved. There is no effort to withhold his opinions concerning what parameters should be considered in the model.

In his memo Dr. Teeter states:

4. It is not clear to me how un-flocculated and flocculated inorganics would be defined. Floc size measurements from previous studies indicate that continuous floc spectra occur under cohesive component). Therefore, I don't immediately see the rationale for representing unflocculated and flocculated inorganics (silts and clays) in the model.

Id. The record is replete with similar examples of the detailed give-and-take between team members and others. AR0000422-52.³³ These meetings are classic examples of cooperative federalism; not the extreme concentration of power in a federal executive as Plaintiffs suggest. [The Federalist No. 17 \(Alexander Hamilton\)](#).

E. Model Documentation Provided Adequate Public Notice and Comment

Remarkably, Plaintiffs' state that EPA restricted public access to information concerning the models used to develop the TMDL allocations. [Plaintiffs' Br. 44-53](#). In fact, EPA provided unfettered access to the decision making process. Beginning in 2005 EPA held open meetings with citizens and scientists discussing the Bay model, how it could be improved, and what data to use. AR0000422. Those meetings continued through 2010. As noted above, Plaintiffs' members held and participated in many of those meetings. Ex E. List of Meetings on Model Development and Attendees.

Plaintiffs argue that "core documentation" concerning the model was not provided to the public. [Plaintiffs' Br. 45](#). The word "documentation" is a term of

³³ Appendix C-1 of the TMDL identifies 11 committees and work groups that provided input into development of the Bay TMDL and the CBWM; Modeling Subcommittee, Sediment work group, Urban Stormwater Workgroup, Implementation Committee, Nutrient Subcommittee, Water-Quality Assessment Workgroup, Principals Staff Committee, Scientific and Technical Advisory Committee, Agricultural Nutrient Reduction Workgroup, Water Quality Steering Committee, Tributary Strategy Workgroup.

art when referring to a computer model. It is essentially a user's manual. The level of complexity of the model and the number of different parameters (data points) it relies upon determines the complexity of the documentation. While documentation helps the user understand how to run the model and what judgment calls the modeler made in running the model, *e.g.*, what data to use, even a sophisticated modeling expert would want to meet with the modeler to discuss operation of the model. *See* EPA's Guidance on the Development, Evaluation and Application of Environmental Models, EPA/100K-09/003 (Mar. 2009), Plaintiffs' Ex. 3.

Moreover, as Plaintiffs point out, the area covered by the TMDL is enormous. [Plaintiffs Br. 44](#). All sources for the three pollutants throughout the watershed could not be measured. Thus, a model to estimate loads and reductions had to be developed. Given the enormity of the task, it is not surprising that the model went through several iterations and is complex.

The development of a model this complex is not performed by one person but is a community effort. *See* [Plaintiffs' Ex. 3 at 8](#) ("model development is collaborative effort"). Eleven different committees and workgroups were assembled by the CBP to hash out differences concerning model development and data to be used. During those public meetings stakeholders, citizens and states, openly discussed the development of the model and the judgment calls that had to

be made along the way. According to the information provided in Appendix C to the TMDL, Plaintiffs' members attended and hosted many of those meetings. AR0000422-54. Thus, it is difficult to determine the accuracy of Plaintiffs' assertion: either their members had access to the same information that the states and other stakeholders did or chose not to participate in the give and take with the various workgroups. In either case, Plaintiffs' members on whose behalf they purportedly have filed suit did have access to adequate "documentation" concerning the model.

Plaintiffs make much of EPA's Guidance on the Development, Evaluation and Application of Environmental Models, EPA/100K-09/003 (Mar. 2009), [Plaintiffs' Ex. 3](#), and the need for transparency in model evaluation; however, they ignore the linchpin supporting that need – "to enable communication between modelers, decision makers, and the public." *Id.* at 37. While written documentation can provide that communication, such communication could also be obtained by attending the numerous public workgroup meetings or scheduling a meeting with the Bay Program modelers as prior model reviewers had done. AR0015372-AR0015382; AR0015010-AR0015022.

Again, Plaintiffs' members either had the requisite information by attending the workgroup meetings or chose not to do so instead deciding to sit on the sidelines and later complain about a lack of sufficient information to validate the

model. Plaintiffs' failure to engage does not mean that EPA "restricted access" to critical information or failed to provide adequate public comment. Nor does it mean that EPA's alleged failure to provide full documentation for each aspect of the model invalidates the model results. This assertion is proven by the fact that the states and countless stakeholders like Defendant Intervenors have accepted the model and its results even with the lack of written documentation because they participated in the stakeholder meetings.

Moreover, the only remedy to Plaintiffs' claim is to remand the TMDL to the agency until better documentation can be provided. That would be a wasted effort as EPA has already revised the model pursuant to the adaptive management requirements of the Bay TMDL. *See* AR0000329-36.

Plaintiffs' analogy that "EPA provided the car for the test drive, but with outdated and incomplete information describing what was under the hood" is not accurate. [Plaintiffs' Br. 50](#). EPA actually provided information for a 2008 model car on a 2010 model for which the engine and other functionally important components were essentially the same. While the newer model contained some upgrades *e.g.*, better radio, they did not impact functionality.

Plaintiffs' claim that EPA allocated loads to hundreds of sources is not true. [Plaintiffs' Br. 55-56](#). EPA gave the states basin level allocations of nutrients and sediment. AR0023289. The states took those allocations and developed their

WIPs, which describe the further distribution of these caps among the various pollution sources. *See, e.g.*, Phase I WIP for Maryland, AR0025525.

F. EPA Had a Rational Basis to Utilize The Bay Watershed Model In Generating TMDL Allocations

Plaintiffs argue that the Bay Watershed Model is flawed and EPA's decision to assign pollution allocations based upon the model was arbitrary and capricious. [Plaintiffs' Br. at 54-57](#). Arbitrary and capricious review allows agency decisions to stand as long as an agency can give a reasonable explanation for its decision based on the information it had at the time. A reviewing court will discount agency decisions based upon model results "only if there is no rational relationship between the model chosen and the situation to which it is applied. *See, e.g., Chemical Mfrs. Ass'n, 28 F.3d at 1265*.

Hence the normal criterion by which to evaluate a model is not the accuracy of the assumptions from which it proceeds but the utility of the results it produces. While the agency must if challenged "provide a full analytical defense" of its model, ..., it need not justify the model on an ad hoc basis for every chemical to which the model is applied, even when faced with data indicating that it is not a perfect fit. To require as much would be to defeat the purpose of using a model.

Id. (citation omitted).

Here, EPA and the modeling workgroup participants have continued to refine the model since the 2007 review cited by Plaintiffs. Since that time, a

number of additional data sites have been added to improve calibration and validation of the model. *See* AR0015010-AR0015022.

Absent from Plaintiffs' brief is any mention of the state Tributary Strategies. Their complaints recognize the cooperative development of these allocations. [AFBF Complaint ¶¶ 35-36](#); [NAHB Complaint ¶¶ 42-43](#). However, as the United States notes, these Tributary Strategies praised by Plaintiffs, *id.* at ¶¶ 38-39 and ¶¶ 45-46,³⁴ were premised upon earlier, less refined versions of the model Plaintiffs assert is fatally flawed. [U.S. Br. at 11-13, 16-17](#). It is hard to reconcile their complaints about how flawed the current Bay model is when they extol the virtues of a less sophisticated version. In any event, the modeled outputs of the two models are remarkably similar.

In 2003, the states agreed to cap nitrogen and phosphorous discharges at 175 million pounds and 12.8 million pounds, respectively. AR0005397. The sediment cap equaled the phosphorous goal. AR0005397 at 400. Those goals were to be met by the Tributary Strategies. AR0005397. *See also* AR0005477; AR0005395. The state and federal partnership agreed that those load reductions were based upon the Bay Water Quality Model. AR0005397-98. The partners recognized that

³⁴ While the Tributary Strategies did make progress they did not succeed in eliminating Bay water quality impairments. Office of the Inspector General U.S. EPA, Development Growth Outpacing Progress in Watershed Efforts to Restore the Chesapeake Bay, Report No. 2007-P-00031, Sept. 10, 2007. <http://www.epa.gov/oig/reports/2007/20070910-2007-P-00031.pdf>

the loads maybe adjusted overtime as the model was further refined. AR0005400-01.³⁵ The Bay TMDL set watershed loadings at 187 million pounds of nitrogen and 12.5 of phosphorous. Statistically speaking, these numbers are very similar given the size of the watershed.

In support of their argument that EPA used flawed data to run the model, Plaintiffs produce a chart based upon a NRCS October 2010 draft report analyzing the amount of cultivated cropland estimated by EPA and NRCS to be in conservation tillage. [Plaintiffs' Br. 60](#). However, the "large" difference identified by Plaintiffs is simply due to NRCS's use of a blended tillage method (average of conventional and conservation value) (8,365,705 lbs/yr of nitrogen) which EPA did not use. Even so, the results are remarkably close.³⁶

This alleged "large" flaw in EPA's data set simply points out the differences between the purposes of the two models and the method used for developing input data. The Bay Program used county level data. Given the number of farms within the watershed, such a decision was reasonable. NRCS on the other hand was interested in farm level estimations thus it interviewed farmers within a discrete geographical area to obtain input data. While NRCS' data may be more accurate at

³⁵ This concept of "adaptive management" is prominently recognized in the Bay TMDL. AR0000329-36.

³⁶ The purported difference cited by Plaintiffs is 8,349,846 lbs/yr of nitrogen. *Id.*

the farm level, it is not accurate for the entire watershed – NRCS cannot provide data for areas in which it did not conduct interviews.

Plaintiffs’ claim that EPA estimation of agricultural sediment loading was not accurate is equally shaded by the method used to generate the figures they cite. Plaintiffs used percentages to present their argument. However, percentages are skewed by the relative percentages assigned to other source categories. Here, NRCS assigned a higher percentage to urban areas than EPA did thus NRCS’ agricultural percentage is smaller than EPA’s. Hence, NRCS percentage is merely a reflection of the differences in assumptions made by the two agencies on the proper level of urban sediment runoff.

Plaintiffs baldly assert that EPA rejected relevant information it knew to be false and employed models that were not rationally connected to reality. The “knowing falsity” Plaintiffs refer to is EPA’s honest assessment the watershed model like all models has some degree of uncertainty. AR0033473. *See also* [Plaintiffs’ Ex. 3 at 38](#). Here, model reviewers and apparently all of the Bay states considered those uncertainties to be acceptable. Although they noted prior criticisms of certain aspects of the sub-models used by EPA, three well respected scientists and academics stated in their comment letter to EPA:

Nonetheless, we believe that the substantial majority of knowledgeable environmental scientists in the region agrees with the premise that the modeling framework used to develop the Draft

TMDL represents the best current incorporation of available science with which to set and allocate maximum loads within the watershed.

AR0033473 at 75.

Thus, while the Bay models may not represent the “reality” of agricultural and homebuilding lobbyists, they do adequately represent the reality of pollution loading and impacts in the Chesapeake Bay – the reality to be addressed by the TMDL. See AR0015010-AR0015022; AR0015372-AR0015382.

As the D.C. Circuit stated long ago,

the very nature of a scientific inquiry on the frontiers of scientific knowledge will rarely allow a court to compel an agency to adopt a particular hypothesis. Naturally, the further an agency's regulations stray from the frontiers of knowledge, the less deference courts will extend. But as long as Congress delegates power to an agency to regulate on the borders of the unknown, courts cannot interfere with reasonable interpretations of equivocal evidence.

[Public Citizen Health Research Group v. Tyson, 796 F.2d 1479, 1504-05 \(D.C.](#)

[Cir. 1986\)](#)(evaluation of OSHA science concerning dose response relationship to ethylene oxide).

Congress directed EPA in cooperation with the states to develop a plan and begin its implementation to achieve the nutrient and water quality goals of the Bay Agreements. [33 U.S.C. § 1267\(g\)\(1\)\(A\) and \(B\)](#). Congress equally directed EPA to ensure that TMDL’s are developed to preserve water quality in our nation’s waters. [Id. at 1313\(d\)](#). Given the size of the Chesapeake Bay watershed and the complexity of the pollution sources and impacts on the Bay, EPA and the states

had clearly been asked by Congress to regulate on the borders of watershed science. Thus, despite the fact that there are uncertainties in the models and the data, as there is with all models, EPA and the states have reasonably concluded that use of the models and the existing data provide the best scientific support for allocating pollution loads throughout the Bay watershed.

CONCLUSION

Based upon the foregoing and the memorandum submitted by the United States in opposition to Plaintiffs' motion for summary judgment and its cross-motion for summary judgment, the Court should find that EPA had authority to issue the Bay TMDL, provided proper notice and comment, and properly relied upon the Bay watershed and water quality models in developing the Bay TMDL.

Respectfully submitted,

/s/ Jon A. Mueller

Jon A. Mueller (Admitted *Pro Hac Vice*)

Chesapeake Bay Foundation

6 Herndon Avenue

Annapolis, MD 21403

Telephone: (410) 268-8816

Fax: (410) 268-6687

Email: Jmueller@cbf.org

Lee Ann H. Murray (PA Bar #79638)

Chesapeake Bay Foundation

The Old Waterworks Building

614 North Front Street, Suite G

Harrisburg, PA 17101

Telephone: (717) 234-5550

Fax: (717) 234-9632

Email: LAMurray@cbf.org

*Co-Counsel for Chesapeake Bay Foundation, Inc.,
Citizens for Pennsylvania's Future, Jefferson
County Public Sanitation District, and Midshore
Riverkeeper Conservancy*

/s/ Richard A. Parrish (by JAM with consent)

Richard A. Parrish (Admitted *Pro Hac Vice*)

Southern Environmental Law Center

201 West Main Street, Suite 14

Charlottesville, VA 22902

Telephone: (434) 977-4090

Fax: (434) 977-1483

Email: Rparrish@selcva.org

Counsel for Defenders of Wildlife

Of Counsel:

Brian Glass (Pa. Bar No. 89405)

Citizens for Pennsylvania's Future

1500 Walnut Street, Suite 502

Philadelphia, PA 19102

Tel: (215) 545-9694

Fax: (215) 545-9637

Email: glass@pennfuture.org

CERTIFICATE OF COMPLIANCE

Pursuant to the Case Management Order filed June 28, 2011, I hereby certify that the forgoing Intervenors' Memorandum complies with the word-count limit and does not exceed the allotted 7,000 words. *See* Order ([Dkt. No. 65](#)).

Certification is reliant upon the word count feature of the word-processing system used to prepare this brief.

/s/ Jon A. Mueller

Jon A. Mueller

CERTIFICATE OF SERVICE

I certify that on April 23rd, 2012, a copy of the foregoing Memorandum was electronically filed and served upon the following:

Amanda J. Lavis
alavis@rhoads-sinon.com

Carla S. Pool
carla@aqualaw.com

Christopher D. Pomeroy
chris@aqualaw.com

Gregg I. Adelman
gadelman@kaplaw.com

Kent E. Hanson
kent.hanson@usdoj.gov

Kirsten L. Nathanson
knathanson@crowell.com

Lisa M. Ochsenhirt
lisa@aqualaw.com

Paul J. Bruder , Jr
pbruder@rhoads-sinon.com

Richard E. Schwartz
rschwartz@crowell.com

Robert J. Tribeck
rtribeck@rhoads-sinon.com

Stephen R. Cerutti
Stephen.Cerutti@usdoj.gov

Steven A Hann
shann@hrmml.com

William D. Auxer
wauxer@kaplaw.com

/s/ Jon A. Mueller

Jon A. Mueller

Index of Exhibits

Exhibit A: Chesapeake Bay Program, Principals' Staff Committee, Meeting Minutes, October 1, 2007

Exhibit B: Chesapeake Bay Program, Principals' Staff Committee, Meeting Minutes, June 18-19, 2008

Exhibit C: 1987 Chesapeake Bay Agreement

Exhibit D: 2000 Chesapeake Bay Agreement

Exhibit E: Summary of Meetings on Model Development and Attendees compiled from TMDL Appendix C, AR0000422

Exhibit F: Sediment Transport Modeling PI Meeting and Modeling Subcommittee Quarterly Review, Minutes, January 11, 2005

Exhibit G: Dr. Allen Teeter Memorandum, March 3, 2005