UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

ANACOSTIA RIVERKEEPER, INC., *et al.*,	)	
Plaintiffs,	)	
v.	)	09-cv-97 (RCL)
LISA JACKSON, Administrator, United States Environmental Protection Agency, *et al.*,	)	
Defendants.	)	

MEMORANDUM OPINION

I. INTRODUCTION

This action is brought by plaintiffs Anacostia Riverkeeper, Inc. and Friends of the Earth, Inc., two DC-based non-profit corporations, to challenge defendant Environmental Protection Agency's ("EPA" or the "Agency") approval of a pollution control plan for the Anacostia River jointly submitted by the District of Columbia and Maryland in accordance with the Federal Water Pollution Control Amendments of 1972, commonly known as the Clean Water Act ("CWA" or the "Act"), 33 U.S.C. § 1251 *et seq.* Under the CWA, a State (including the District) is obligated to develop water quality standards for each navigable water body within its jurisdiction. These standards generally consist of expected uses of the water body and criteria defining the maximum level of pollution allowable to protect such uses. The CWA requires each State to monitor its waters for compliance with such standards following the implementation of technology-based pollution controls under separate provisions of the Act. A determination that a particular water body is not meeting applicable standards triggers a State's obligation to develop and submit for EPA approval total maximum daily loads ("TMDLs") for the pollutants in that

water body. Relying on limits set by these TMDLs, federal permit programs, along with state and local actors, implement water-pollution controls to achieve contamination levels necessary to attain and maintain water quality standards. This suit involves a challenge to a TMDL for the Anacostia River developed by the District and Maryland and approved by EPA in 2007.

The Anacostia River is, in a word, dirty. Its waters are frequently turbid, resulting in an opaque and muddy appearance. This condition results from an excess of sediments and total suspended solids ("TSS") in the river. The polluted state of the Anacostia render it unfit for the uses that the District and Maryland have designated the watershed to support, including contact recreation (*e.g.*, swimming), secondary contact recreation (*e.g.*, boating), and the protection and propagation of plant and animal life. The sullied state of today's Anacostia is no surprise: Despite the existence of similarly turbid conditions since the inception of the CWA, neither the District nor the Agency lifted a finger to address any concerns, whether related to excess sediments and TSS or other contaminants, for nearly two decades—in contravention of statutory obligations to act as early as 1979. In plain disregard of its duties as set forth in the Act, the District did not begin to own up to its responsibilities under the CWA until being compelled by a district court ruling. *Kingman Park Civil Ass'n v. EPA*, 84 F. Supp. 2d 1 (D.D.C. 1999). And a few years later, the first attempt by the District and EPA to develop a sediment/TSS TMDL for the Anacostia was invalidated by the D.C. Circuit as contrary to the plain text of the CWA. *Friends of the Earth, Inc. v. EPA*, 446 F.3d 140 (D.C. Cir. 2006) ("*Friends II*"). After this ruling, EPA coordinated a joint effort between the District and Maryland to develop a single TMDL for both jurisdictions to address excessive sediment and TSS pollution in the Anacostia River. The resulting sediment/TSS TMDL, which was submitted to EPA in June 2007 and approved one month later, is the subject of this suit.

II. BACKGROUND

A. Statutory Framework

The Clean Water Act "is a comprehensive water quality statute designed to 'restore and maintain the chemical, physical, and biological integrity of the Nation's waters.'" *PUD No. 1 of Jefferson Cty. v. Wash. Dep't of Ecology*, 511 U.S. 700, 704 (1994) (quoting 33 U.S.C. § 1251(a)). A core element of the CWA is its 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. 33 U.S.C. § 1251(b).[1] The first step requires EPA, "among other things, to establish and enforce technology-based limitations on individual discharges into the country's navigable waters from point sources." *PUD No. 1*, 511 U.S. at 704 (citing 33 U.S.C. §§ 1311 & 1314). A point source is "any discernable, confined and discrete conveyance . . . from which pollutants are or may be discharged," 33 U.S.C. § 1362(14), such as an industrial pipe or sewage drain. *Am. Paper Institute, Inc. v. EPA*, 996 F.2d 346, 348–49 (D.C. Cir. 1993). Because point sources are identifiable locations where pollutants enter a water body, they constitute ideal starting points for the monitoring and regulation of water contamination. Section 301 of the CWA directs EPA to develop effluent limitations that cap the maximum allowable discharge at each individual point source. 33 U.S.C. § 1311(b)(1). Such restrictions incorporate "the best available technology economically achievable for a particular class of waters," *id*. at § 1311(b)(2), and evolve over time with the growth of technological means to limit contamination. Once promulgated, the effluent limitations are incorporated into the National Pollutant Discharge Elimination System ("NPDES"). The NPDES is a permit program through which individual entities responsible for covered point sources receive permits setting the maximum discharges of particular

[1] For purposes of the CWA, the District is considered a State. 33 U.S.C. § 1362(3).

contaminants via these sources. *See generally 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 of pollution control technology over time.").

Point sources, however, are not the only manner in which pollutants enter a water system. Sediments and other biological materials can easily accumulate in rivers through normal ecological processes, such as drainage from wooded areas or erosion of the river bank. Many toxins are also capable of entering water systems through run-off from agricultural land. And overflows from insufficiently drained urban areas—particularly during extreme weather—often lead to a massive influx of sediments, TSS and other pollutants. To capture these and similar effects—all of which are difficult to monitor or regulate—the CWA aggregates large-scale sources of water contamination into categories of "non-point source" pollution. At the most general level, non-point source pollution is the entry of contaminants into the water body by any means other than a discrete point source.

Non-point source pollution is often so extensive that it continues to impair water bodies even after technology-based effluent limitations have been fully implemented. But "[u]nlike point source pollution, EPA lacks the authority to control non-point source discharges through a permitting process." *Defenders of Wildlife v. EPA*, 415 F.3d 1121, 1124 (10th Cir. 2005). To address water quality concerns that linger after implementation of effluent limitations, the CWA's second step in its approach to water cleanup requires each State to develop water quality standards for interstate waters within its borders. *Id*. In keeping with the interactive process envisioned in the CWA, a State must submit these standards to EPA for review and approval. *Meiburg*, 296 F.3d at 1025. Under EPA regulations, these submissions must contain (1)

designated uses for the water body, (2) information concerning the methodology for choosing these uses, (3) water quality criteria sufficient to protect the designated uses, (4) an antidegradation policy to prevent clean waters from slipping below applicable standards, (5) a certification that the water quality standards were properly adopted in a manner consistent with state law and (6) general information useful in aiding the Agency's review. 40 C.F.R. § 131.6(a)–(f). The "designated uses of the navigable waters involved and the water quality criteria for such waters" are the heart of these water quality standards. 33 U.S.C. § 1313(c)(2)(A); *see also* 40 C.F.R. § 130.2(d) (defining water quality standard as "a designated use or uses for the waters . . . and water quality criteria for such waters").

A designated use is exactly as it sounds: after considering "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), a State must catalogue the manner in which each of its covered waters are to be utilized by governments, persons, animals and plants.[2] Examples of designated uses include drinking or reservoir purposes, primary (*e.g.*, swimming) or secondary (*e.g.*, boating) recreation, and the preservation and support of plant and animal life. *Id.* § 131.3(f).

Water quality criteria, on the other hand, are measures of the conditions of a water body and "come in two varieties: specific numerical limitations on the concentration of a specific pollutant in the water . . . or more general narrative statements applicable to a wide set of pollutants." *Am. Paper*, 996 F.2d at 349. Numeric criteria articulate specific, measurable quantities of pollutants that can be readily monitored, while narrative criteria are general descriptions of water quality, such as "free from visible waste" or "sufficient clarity for aesthetic

[2] Uses are "designated" because all potential uses of a water body must be considered "whether or not they are being attained" at the time the State determines which particular uses are deemed applicable to each individual water body. 40 C.F.R. § 131.3(f).

purposes." Whether numeric or narrative, the key aspect of water quality criteria is that they are dependent upon designated uses associated with them; as EPA regulations explain: "States must adopt those water quality criteria that protect the designated use." 40 C.F.R. § 131.11(a).

After promulgating water quality standards, States are responsible for monitoring their covered waters and, when necessary, identifying those waters for which 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). Every two years, a State must submit to EPA a list of waters that do not currently attain, and based on current pollution controls are not expected to attain, applicable water quality standards. 40 C.F.R. § 130.7(b)(3) & (d). Under governing regulations, this submission—known as a "303(d) list"—contains all waters for which (1) technology-based effluent limitations, (2) more stringent effluent limitations imposed by State or local authority, and (3) other pollution controls required by State law are "not stringent enough to implement any water quality standards applicable to such waters." *Id*. § 130.7(b)(1).

The inclusion of a water body on a State's 303(d) list triggers a statutory obligation to develop total maximum daily loads, or TMDLs, which specify the absolute amount of particular pollutants the entire water body can take on while still satisfying all water quality standards. 33 U.S.C. § 1313(d)(1)(C). As EPA explains: "A TMDL sets the quantity of a pollutant that may be introduced into a water body without causing an exceedance [*sic*] of the applicable water quality standard." EPA Decision Rationale: Total Maximum Daily Loads for Anacostia River Basin Watershed 1, July 24, 2007, Ex. 2 to EPA Cross-Mtn., Sep. 18, 2009 [27-2] ("DR"). States submit proposed TMDLs to EPA for review, at which time the Agency can either approve or reject such proposals. 33 U.S.C. § 1313(d)(2). Rejection of a submitted TMDL triggers EPA's duty to develop a substitute TMDL for the water body in question. *Id*.

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. Point source pollution is then further subdivided into wasteload allocations ("WLAs"), which are the portions of the water body's pollutant discharges "allocated [under the TMDL] to one of its existing or future point sources of pollution." 40 C.F.R. § 130.2(h). Similarly, the total predicted non-point source pollution is separated into load allocations ("LAs"), which are the portions of a water body's contaminant inflow "attributed either to one of its existing or future non-point sources of pollution or to natural background sources." *Id.* § 130.2(g). Along with a statutorily-mandated margin of error, the total TMDL is thus the "sum of individual WLAs for point sources and LAs for non-point sources and natural background." *Id.* § 130.2(i); *see also* DR at 1 ("EPA's regulations define a TMDL as the sum of [WLAs] assigned to point sources, the [LAs] assigned to non-point sources, and natural background, and a margin of safety.").

TMDLs are not self-implementing instruments, but instead serve as informational tools utilized by EPA and the States to coordinate necessary responses to excessive pollution in order to meet applicable water quality standards. *Pronsolino v. Nastri*, 291 F.3d 1123, 1129 (9th Cir. 2002). "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." *Meiburg*, 296 F.3d at 1025. On the federal side, the LAs and WLAs that make-up the TMDL are incorporated into the NPDES system through permit-based regulation of point sources. *See* EPA, Water Quality Planning and Management, 50 Fed. Reg. 1774, 1774 (Jan. 11, 1985) ("Once a TMDL has been completed, a wasteload allocation or load allocation (WLA/LA) for that TMDL forms the basis for permit limitations for individual dischargers."). Incorporated in this manner, WLAs provide a "supplementary basis [for permit limits] so that

numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels." *Raymond Proffit Found. v. EPA*, 930 F. Supp. 1088, 1090 (E.D. Pa. 1996). This process also ensures that the flows of contaminants from point sources are adjusted to account for non-point source pollution, which is inherently more difficult to monitor, control, or reduce. *Am. Littoral Soc'y v. EPA*, 199 F. Supp. 2d 217, 229 (D.N.J. 2002). On the state side, the maximum levels and allocations of pollutants in a TMDL are incorporated into the State's water quality management plan. *EDF v. Costle*, 657 F.3d 275, 294 (D.C. Cir. 1981); *see also Am. Littoral Soc'y*, 199 F. Supp. 2d at 229 ("Any EPA-approved TMDLs must be incorporated by the State into its continuing planning processes."). Through these plans, States coordinate among agencies, local authorities, and non-governmental organizations to further reduce both point and non-point source pollution. In sum, a TMDL provides crucial information for federal, state and local actors in furtherance of the cooperative efforts to improve water quality envisioned in the CWA.

B. Factual and Procedural History

1. Applicable Water Quality Standards

Both the District and Maryland have promulgated water quality standards under the CWA applicable to sediment and TSS pollution in the Anacostia River. Maryland, for its part, designates its sections of the Anacostia as suitable for Uses I-P and II, which include "water contact recreation" and "support of estuarine and marine aquatic life." MD. CODE REGS. 26.08.02.08(O)(1)–(2) & 26.08.02.03-3(B)–(C). To achieve and protect these uses, Maryland provides both numeric and narrative water quality criteria applicable to sediment and TSS pollution. These metrics include numeric criteria of 50 Nephelometer Turbidity Units ("NTUs") monthly average and seasonal Secchi depths of .4 meters, *id*. at 26.08.02.03-3(A)(5)(b) & (B)(1)

& (C)(9)(b),[3] as well as a narrative criterion that turbidity resulting from excessive sediment and TSS pollution must "not exceed levels detrimental to aquatic life." *Id*. The District, for its part, designates its sections of the Anacostia for Class A, B, C, D, and E uses, which include, *inter alia*, contact and secondary contact recreation, aesthetic enjoyment, and protection of plant and animal life. D.C. MUN. REGS. tit. 21 § 1101.2. The District has also promulgated both narrative and numeric criteria in order to achieve and maintain these designated uses. Included among its narrative criteria are requirements to keep the Anacostia free from "objectionable odor, color, taste, or turbidity," maintain the watershed's "aesthetic qualities," and ensure that it can "support aquatic life." *Id*. §§ 1104.1(c) & 1104.4. As for its numeric criterion, the District lists 20 NTUs and .8 meters Secchi depth as necessary to meet its water quality goals. *Id*. § 1104.8.

2. Prior Attempts to Develop a Sediment/TSS TMDL for the Anacostia

The development of a sediment/TSS TMDL is a story of excessive negligence and unnecessary delay. Though at its inception the CWA obligated each State to begin submitting 303(d) lists and developing TMDLs by June 28, 1979, 33 U.S.C. § 1314(a)(2)(D), the District did nothing before that deadline—or for the 18 years that followed. *Kingman Park*, 84 F. Supp. 2d at 2. Eventually, a number of organizations joined to bring what has come to be known as a "constructive submission" suit. The theory underpinning such a suit is that a State's inaction in the face of its obligations under the CWA constitutes the legal equivalent of a "submission" of a 303(d) list that includes no waters and requires no TMDLs. *Id*. at 4–5. Treating a State's silence in this manner is critical because a submission to EPA triggers its responsibility to review that proposal and—if it disagrees with the State's conclusions—list appropriate waters and develop TMDLs for those waters. Where successful, these suits have become critical tools for organizations and interest groups to prompt action under the CWA.

[3] NTUs and Secchi depth are discussed in greater detail below. *See infra* Sections IV.A.1 & IV.A.2.c.

As had many courts before it, the district court adopted the constructive submission theory over EPA's objection. *See id*. at 5 ("Like the majority of courts that have confronted this quandary, this Court holds that if a State fails over a long period of time to submit proposed TMDLs, this prolonged failure may amount to 'constructive submission' by that State of no TMDLs.") (quotations omitted; collecting cases). Emphasizing the District's "silence and intransigence" in the face "of its Section 303(d) obligations," the *Kingman Park* Court held that "[w]here a State has made a decision that would otherwise trigger EPA review, the State may not evade such review by simply refusing to reduce its decision to a formal submission." *Id*. at 6. Consistent with this holding, the court denied EPA's motion to dismiss.

In the wake of the *Kingman Park* decision, EPA, the District and the plaintiffs entered into a consent decree under which the District agreed to regularly submit 303(d) lists to EPA and begin developing TMDLs for its waters. The Anacostia River was included on the initial 303(d) list, and in 2002 the District submitted and EPA approved a TMDL to address excess sediment and TSS pollution in the Anacostia that relied upon annual, rather than daily, load limits, *Friends of the Earth v. EPA*, 346 F. Supp. 2d 182 (D.D.C. 2004) ("*Friends I*")—despite the CWA's instruction to develop a "total maximum *daily* load." 33 U.S.C. § 1313(d)(1)(C) (emphasis added). The same plaintiffs before the Court in this case subsequently brought a challenge under the CWA and APA raising several concerns with that TMDL—including the use of maximum annual loads. In a 2004 opinion, Judge Urbina rejected plaintiffs' challenges and upheld EPA's approval of the proposed TMDL. *See generally Friends I*, 346 F. Supp. 2d at 188–203 (granting summary judgment for EPA). On appeal, the D.C. Circuit reversed the *Friends I* decision, focusing solely on the question of whether a TMDL can be expressed in annual, rather than daily, limits. *Friends II*, 446 F.3d at 143–44. The D.C. Circuit rejected the district court's

deference to EPA's own interpretation, concluding that the statutory language unambiguously commands the development of TMDLs expressed in daily load limits. *See id*. at 144 ("Nothing in this language even hints at the possibility that EPA can approve total maximum 'seasonal' or 'annual' loads."). Without addressing any other issues on appeal, the *Friends II* Court remanded the action "to the district court with instructions to vacate EPA's approvals." *Id*. at 148.

3. Development of the Current Sediment/TSS TMDL

On remand, the district court stayed the vacateur at the request of all parties while the Agency and the District developed a new sediment/TSS TMDL. DR at 10. Recognizing that the Anacostia is a multistate water body and that efforts to reduce pollution in the river necessarily require coordination between multiple jurisdictions, EPA brought the District and Maryland together to collaborate on a new, system-wide sediment/TSS TMDL for the river. *See id*. An advisory group made up of representatives from the District, Maryland, EPA and the Washington Area Sewer Authority ("WASA") developed models for certain aspects of the Anacostia and used these analyses to create a sediment/TSS TMDL for the watershed. A draft TMDL was then published and made subject to public comment from April 6, 2007 to May 7, 2007. *Id*. at 33.

Plaintiffs, through counsel Earthjustice, submitted a series of comments in response to the draft TMDL. *See* Earthjustice Comments to Maryland and the District of Columbia Draft Total Maximum Daily Loads for the Anacostia River Basin, May 7, 2007, Ex. 6 to EPA Cross-Mtn., Sep. 18, 2009 [27-6] ("Earthjustice Comments"). Plaintiffs' comments raised several general concerns, including that the draft TMDL failed to (1) implement all applicable water quality standards, (2) provide an adequate margin of safety under the CWA, (3) include properly sub-divided wasteload allocations, and (4) provide assurance of proper implementation. *See generally id*. The District and Maryland subsequently submitted a joint response to objections

raised by both plaintiffs and other commentators. *See* DC & Maryland Comment Response Document Regarding the TMDL of TSS in the Anacostia River Watershed, June 21, 2007, Ex. 3 to EPA Cross-Mtn., Sep. 18, 2009 [27-3] ("DC/MD Cmt. Response").

One day later, the District and Maryland submitted their proposed TMDL to EPA for review. *See* Final Total Maximum Daily Load of TSS for the Anacostia River Basin, June 22, 2007, Ex. 1 to EPA Cross-Mtn., Sep. 18, 2009 [27-1] ("Final TMDL"). The Final TMDL's stated objectives are to ensure (1) that "aquatic life is protected in the tidal and non-tidal waters of the Anacostia," (2) that "MD's and DC's sediment-related water quality standards that support aquatic life are met in their respective portions of the watershed," and (3) "in particular that the numeric criteria for water quality are met in the tidal waters." *Id*. at vi. Consistent with these goals, the Final TMDL focuses almost exclusively on determining pollutant load limits for the protection of submerged aquatic vegetation ("SAV") and other plant and animal life. To this end, the Final TMDL lists only those designated uses and water quality criteria related to aquatic life. *Id*. at 21–23. Similarly, though the Final TMDL concludes that the relevant "endpoint of the TMDL (the most stringent reduction in sediment loads) is DC's tidal Anacostia clarity criterion," *id*. at 24, it does not evaluate whether that criterion is more stringent than criteria tied to recreational or aesthetic uses of the Anacostia under the District or Maryland law. To evaluate its proposed reductions in sediment and TSS pollution, the Final TMDL employs a series of models to predict, *inter alia*, non-point source pollution entering the Anacostia, the hydrological and sediment erosion along the water body, the sediment loads required to meet water quality standards in the river, and flows and clarity conditions in the river basin. *See generally id*. at vi–vii. Using data collected between 1995 and 1997, the Final TMDL relies on these models to conclude that annual reductions in sediments and TSS to 7097.6 tons/year and 3396.1

tons/growing season (defined as the period from April 1 to October 31) are necessary for the protection of aquatic life in the Anacostia. *Id*. at vii. These totals are then broken down into daily maximum loads distributed among three sources: WLAs for point sources and municipal separate storm sewer systems ("MS4s"),[4] LAs for forests and other underdeveloped lands, and an implicit margin of safety incorporated into the Final TMDL's modeling process. *Id*. at vii–xi. Together, the total proposed reduction represents an approximately 85% decline in the amount of sediment and TSS pollution in the Anacostia. *Id*. at vii. The Final TMDL then summarizes the process for incorporating the maximum loads into NPDES permits, state regulations, and plans for state and local agencies and organizations, *id*. at xiv–xv, and closes by explaining that "the required reductions [are] to be implemented in an iterative process." *Id*. at xv.

A month after the District and Maryland submitted the Final TMDL for review, EPA issued a written Decision Rationale approving the terms of the proposal. The summary of EPA's decision echoes the three purposes articulated in the Final TMDL—to ensure protection of aquatic life, meet water quality standards related to aquatic life, and meet water quality criteria—and indicates that the numeric target for the proposal is .8 meters Secchi depth, which is the District's water quality criterion for Class C uses. DR at i. The Decision Rationale also notes that EPA concurs with Maryland and the District that the proposed load levels will lead to an 85% reduction in sediment and TSS pollution in the Anacostia, *id*. at ii, and sets forth seven regulatory conclusions. *See id*. at ix (finding that Final TMDL (1) is "designed to implement the applicable water quality standards," (2) includes "a total allowable load as well as individual [WLAs] and [LAs]," (3) considers "the impacts of background pollutant contributions, (4)

[4] MS4s are the sewer and storm drainage systems for major urban areas. "Although MS4s transport non-point sources of pollutants in stormwater, they are legally categorized as point sources under NPDES regulation." Final TMDL at 11. Along the Anacostia, three MS4s play a significant role in introducing sediments and TSS into the water body: Montgomery County, Prince George's County, and the District. *Id*.

accounts for "critical environmental conditions," (5) evaluates "seasonal environmental variations," (6) includes "a margin of safety," and (7) was "subject to public participation").[5]

4. This Litigation

Few changes were made to the proposed TMDL after public comment, and plaintiffs—believing that the Final TMDL fails to account for the alleged shortcomings raised in their comments to the draft TMDL—filed this suit in early 2009 to contest the validity of EPA's approval. Complaint, Jan. 15, 2009 [1].[6] Plaintiffs' action is brought under the CWA and the Administrative Procedure Act ("APA"), which prohibits agency action that is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). The Complaint identifies five purported deficiencies that, according to plaintiffs, render EPA's approval of the Final TMDL arbitrary and capricious: (1) failure to set load limits on sediment and TSS pollution sufficient "to implement the District's and Maryland's applicable water quality standards"; (2) reliance on water quality criteria that will not "provide for attainment" of all relevant narrative and numeric water quality criteria; (3) failure "to take into account critical conditions . . . to protect water quality during high flow events"; (4) improper allocation of pollutant loads "to individual point sources"; and (5) omission of "an adequate margin of safety that takes into account any lack of knowledge." Compl. at ¶ 26(a)–(e). Based on these alleged shortcomings, plaintiffs ask the Court to vacate EPA's approval of the Final TMDL and direct the Agency to develop a new sediment/TSS TMDL for the Anacostia, retain jurisdiction to ensure compliance with such an order, and award costs and fees. *Id.* at 11–12.

[5] The Final TMDL became effective upon EPA's approval, rendering the former TMDL ineffective. The prior suit concerning that TMDL was then dismissed as moot. Order, *Friends I*, No. 04 Civ. 92, Nov. 3, 2008 [68].

[6] Challenges to most EPA actions under the CWA are taken directly to the D.C. Circuit. *See* 33 U.S.C. § 1369(b)(1) (providing that review of Administrator's actions under enumerated sections of CWA "may be had by any interested person in the Circuit Court of Appeals of the United States"). A TMDL, however, is promulgated under § 1313 of the Act, which is not one of the enumerated provisions in § 1369. Jurisdiction thus properly lies with this Court. *See Friends of the Earth v. EPA*, 333 F.3d 184, 189 (D.C. Cir. 2003) ("[O]riginal jurisdiction over EPA actions not expressly listed in section 1369(b)(1) lies . . . with the district court.").

A few months after this suit was filed, WASA— the District's sewer authority and an advisory group participant—moved to intervene as a matter of right or through permissive intervention. Motion to Intervene, Apr. 13, 2009 [8]. Plaintiffs consented, Response to Motion to Intervene, Apr. 22, 2009 [9], and the Court granted permissive intervention under Federal Rule of Civil Procedure 24(b). Order, Apr. 28, 2009 [14]. Less than two months later, a group of local water authorities (the "Municipal Intervenors")[7] requested intervention as well. Motion to Intervene, June 8, 2009 [16]. Plaintiffs again consented, Response to Motion to Intervene, June 19, 2009 [19], and the Court granted the motion. Minute Order, Aug. 6, 2009.

Plaintiffs subsequently moved for summary judgment. Plaintiffs' Motion for Summary Judgment, July 17, 2009 [21] (Ps' Mtn."). In their motion, plaintiffs advance three theories as to why EPA's approval of the Final TMDL is in violation of the CWA: first, for a variety of reasons, the Final TMDL sets load levels that will not achieve water quality standards applicable to sediment and TSS pollution in the Anacostia River under Maryland and DC law, *id*. at 9–17; second, the Final TMDL improperly assigns WLAs on a system-wide basis for the MS4s along the watershed, *id*. at 17–20; and third, the margin of safety incorporated into the Final TMDL is factually unverifiable and thus legally insufficient. *Id*. at 20–22. EPA subsequently cross-moved for summary judgment, arguing that its decision-making was supported by a reasonable review of the evidence, EPA's Cross-Motion for Summary Judgment 14–21, Sep. 18, 2009 [27] ("EPA Cross-Mtn."), that plaintiffs' concerns are unfounded and impose requirements outside the text of the CWA, *id*. at 21–26, that system-wide WLAs for MS4s are appropriate under applicable law, *id*. at 26–30, and that the margin of safety implicit in the models used to develop the Final

[7] Specifically, the Municipal Intervenors include The National Association of Clean Water Agencies, the Wet Weather Partnership, the Maryland Association of Municipal Wastewater Agencies, the Virginia Association of Municipal Wastewater Agencies, the Virginia Municipal Stormwater Association, the Storm Water Association of Maryland, and the West Virginia Municipal Water Quality Association.

TMDL is sufficient. *Id*. at 30–34. At the same time, both WASA and the Municipal Intervenors cross-moved for judgment on behalf of EPA. While both cross-motions parrot positions set forth by EPA, each also advances its own argument, both discussed in greater detail below, concerning what water quality standards are applicable in this context. WASA's Cross-Motion for Summary Judgment 12–17, Sep. 18, 2009 [28] ("WASA Cross-Mtn"); Municipal Intervenors' Cross-Motion for Summary Judgment 5–10, Sep. 18, 2009 [29] ("Municipal Cross-Mtn."). The parties concluded subsequent briefing on all the issues by November 2009.[8] Having reviewed the parties' briefings, the record, and applicable law, the Court, for the reasons set forth below, rejects the majority of plaintiffs' challenges but also holds that EPA's finding that the Final TMDL will attain applicable water quality standards is insufficient under the law and unsupported by the evidence, and thus the Agency's approval of the Final TMDL is arbitrary and capricious. The Court therefore grants in part plaintiffs' motion for summary judgment, and will vacate EPA's approval of the Final TMDL.

III. STANDARD

Summary judgment is properly granted where there is "no *genuine* issue of *material* fact." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247–48 (1986). Here, the facts consist of the record relied upon by EPA to approve the Final TMDL, and the parties do not dispute any of the relevant matters in that record. Accordingly, review of EPA's action is subject only to the APA's command that the Court "review the whole record or those parts of it cited by a party," 5 U.S.C. § 706, and the related requirement to evaluate that record as it was when EPA published its Decision Rationale. *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 420 (1971), *overruled on other grounds by Califano v. Sanders*, 430 U.S. 99, 105 (1977).

[8] This case was later transferred by consent from Judge Roberts to Chief Judge Lamberth this past May. Reassignment of Civil Case, May 5, 2011 [43].

A. Review of Agency Action

EPA's approval of the Final TMDL is an act taken pursuant to the CWA and thus is subject to challenge under the APA and the "indulgent" standards applicable to such review. *Chem. Mfrs. Ass'n v. EPA*, 28 F.3d 1259, 1263 (D.C. Cir. 1994). The APA requires that a reviewing court "hold unlawful and set aside agency action, findings and conclusions found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A); *see also Motor Veh. Mfrs. Ass'n v. State Farm Mutual Auto. Ins. Co.*, 463 U.S. 29, 41 (1983). This standard is narrow and does not permit a court to substitute its policy judgment for that of the agency. *Bluewater Network v. EPA*, 370 F.3d 1, 11 (D.C. Cir. 2004). Indeed, the principal concern on review is solely whether "EPA has 'examined the relevant data and articulated a satisfactory explanation for its action including a rational connection between the facts found and the choice made.'" *Id*. (quoting *Motor Veh. Mfrs.*, 463 U.S. at 43). Even an agency "decision of less than ideal clarity" should be upheld "if the agency's path may be reasonably discerned." *Motor Veh. Mfrs.*, 463 U.S. at 43 (quotations omitted). 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 found and the choice made." *Bowen v. Am. Hosp. Ass'n*, 476 U.S. 610, 626 (1986). A court will therefore "not supply a reasoned basis for the agency's action that the agency itself has not given." *Bowman Trans., Inc. v. Arkansas-Best Freight Sys., Inc.*, 419 U.S. 281, 285–86 (1974); *see also Friends I*, 346 F. Supp. 2d at 196 ("Courts frown on post-hoc rationalizations of discretionary agency behavior because such rationalizations prevent proper judicial review.") (citations omitted).

With respect to interpretation of the CWA, courts apply the familiar *Chevron* framework. First, a court looks to the statutory language to determine whether Congress's intent is clear. "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." *Bluewater Network*, 370 F.3d at 11. If the language of the statute is ambiguous, however, a court will instead "look first to the agency regulations, which are entitled to deference if they resolve the ambiguity in a reasonable manner." *Couer Alaska Inc. v. Se. Alaska Conservation Council*, 129 S. Ct. 2458, 2469 (2009). And where those regulations are ambiguous, a court should "next turn to the [agency's] subsequent interpretation of those regulations," *id*. at 2469, which is given "controlling weight unless it is plainly erroneous or inconsistent with the regulation." *Bowles v. Seminole Rock & Sand Co.*, 325 U.S. 410, 414 (1945).

B. Effect of the *Friends I* Decision

A secondary issue concerning the appropriate legal standard is the extent to which the Court is bound or should otherwise be persuaded by prior rulings on similar issues in *Friends I*. This is particularly important here, as a number of disputes in this case closely mirror objections raised by these same plaintiffs before Judge Urbina. *See, e.g.*, *Friends I*, 346 F. Supp. 2d at 200–01 (concluding that proposed sediment reductions were sufficient to protect all designated uses under DC law); *id*. at 201 (upholding permissible daily variations in maximum inflow of pollutants); *id*. at 201–02 (finding that reliance on numerical criteria satisfied narrative water quality criteria); *id*. at 203 (affirming EPA's decision to permit WLAs on jurisdiction-wide basis for MS4s). In this case, the Court concludes that it need not give more or less weight to the decision in *Friends I* than it would to any other opinion by another court in this district. EPA correctly points out that the *Friends II* opinion did not reverse Judge Urbina's conclusions in *Friends I* on questions relevant here, and thus that opinion remains a statement of law with respect to those issues. *Action Alliance of Senior Citizens v. Sullivan*, 930 F.2d 77, 83 (D.C. Cir.

1991). While technically correct, this is not an instance—as is often the case—where the Circuit Court upheld a number of the lower court's rulings and reversed others. Here the D.C. Circuit discussed *only* the necessity of daily load limits under the CWA, and thus *Friends II* can be read as neither a confirmation nor rejection—tacit or express—of the lower court's conclusions on other issues before it. Judge Urbina's opinion, just as that of any other district court, is not binding on this Court. *J.S. v. Dist. of Columbia*, 533 F. Supp. 2d 160, 162 n..3 (D.D.C. 2008). Accordingly, while the Court will consider the decisions reached in *Friends I* when evaluating the issues before it, it is not bound to the conclusions reached in *Friends I.*

IV. ANALYSIS

Plaintiffs' objections to EPA's decision approving the Final TMDL can be broadly grouped into three categories. First, plaintiffs assert that the Final TMDL is insufficient under the CWA because it (1) does not set load limits necessary to achieve all water quality standards under DC and Maryland law, (2) improperly permits periodic violations of those standards, and (3) relies on the wrong water quality criteria. Second, plaintiffs content that the WLAs for MS4s are improperly aggregated to include a single load allocation for the entire MS4 instead of providing limits for each individual point source within that MS4. Finally, plaintiffs argue that the margin of safety adopted by the Final TMDL and approved by EPA is inadequate. The Court discusses each of these objections in turn.

A. Achievement of Applicable Water Standards

1. TMDLs Must Implement All Water Quality Standards Made Applicable to a Water Body under State Law

Before the Court can review EPA's conclusion that the Final TMDL is sufficient to attain water quality standards applicable to the Anacostia, a predicate issue must be resolved: what are these standards? The CWA instructs that a TMDL must establish pollutant load restrictions "at a

level necessary to implement *the applicable water quality standards* with seasonal variations and a margin of safety." 33 U.S.C. § 1313(d)(1)(C) (emphasis added). And under the Act's implementing regulations, each water quality standard "defines the water quality goals of a water body, or a portion thereof, by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses." 40 C.F.R. § 130.3; *see also Nat'l Wildlife Fed'n v. Adamkus*, 127 F.3d 1126, 1127 (D.C. Cir. 1997) (explaining that water quality standards "include . . . designated uses for each body of water, such as recreational, agricultural, or industrial uses [and] specific limits on the levels of pollutants necessary to protect those designated uses"). Reading these provisions together, then, the CWA requires a TMDL that sets load limits on a pollutant sufficient to reduce contamination to levels necessary to satisfy the narrative and numeric water quality criteria and protect all designated uses applicable to the water body. *See Costle*, 657 F.3d at 294 (stating that TMDLs set "the maximum amount of a pollutant which can be contributed into a stream segment *without causing a violation of the water quality standards*") (emphasis added). This understanding is also consistent with the Supreme Court's rejection of an argument, set forth by owners of a dam that was interfering with certain uses of a water body covered by the CWA, that because the operation of the dam did not cause water quality to violate applicable criteria they were not in breach of the Act. *PUD No. 1*, 511 U.S. at 714. Observing that "the language of § 303 [of the CWA] is most naturally read to require that a project be consistent with *both* components, namely the designated use *and* the water quality criteria.," *id*. at 714–15, the Supreme Court concluded that, "under the literal terms of the statute, a project that does not comply with a designated use of the water does not comply with the applicable water quality standards"—even where water quality criteria are met. *Id*. at 715. In this same sense, a TMDL that is not protective of the designated uses is in violation of

the requirement to establish load levels "for all pollutants preventing or expected to prevent attainment of water quality standards." 40 C.F.R. § 130.7(c)(1)(ii).

Under DC and Maryland law, the Anacostia River is designated for uses related to recreation, aesthetic enjoyment, and protection of aquatic life, and the States have promulgated water quality criteria to protect each such use. *Supra* Section II.B.1. The Final TMDL, however, expressly focuses on the propagation of plant and animal life and—as plaintiffs correctly observed in comments on the draft TMDL—"studiously avoids mentioning or otherwise addressing any other designated uses." Earthjustice Comments at 3.[9] Given this focus, the Final TMDL's declared purpose is "to determine what reductions in suspended sediment loads to the tidal Anacostia result in water clarity improvements *sufficient to support growth of SAV*," *id*. at 28 (emphasis added), and the modeling and analytical methods used "are designed to be *protective of aquatic life* in the non-tidal waters of the Anacostia River, to meet MD's and DC's sediment-related [water quality standards] *that support aquatic life in the tidal waters*, and to meet DC's numeric criterion for water clarity." *Id*. at 26 (emphasis added).

WASA and Municipal Intervenors, while joining the positions staked out by EPA in support of its approval of the Final TMDL, also raise separate arguments defending the Final TMDL's narrow focus on aquatic life. On the one hand, WASA insists that the scope of a TMDL is dictated by the specification of use-impairments in a State's 303(d) list. Thus, WASA argues, because the 303(d) lists submitted by the District and Maryland identify sediment and TSS pollution as detrimental only to plant and animal life, the Final TMDL is required to remedy only these effects. WASA Cross-Mtn. at 12–15. On the other hand, the Municipal Intervenors

[9] For example, when listing designated uses for the Anacostia under state law, the Final TMDL observes only that "DC has classified the Anacostia for current and designated uses *including* category Class C." Final TMDL at 22 (emphasis added). The Final TMDL does not, however, specify that the District has also classified the Anacostia for Class A and Class B designated uses related to recreational and aesthetic enjoyment.

urge that under the CWA, a TMDL need not target all designated uses or water quality criteria, but may focus its attention—as the Final TMDL did—on a subset of water quality standards. Municipal Cross-Mtn. at 5–10. The Court discusses each of these arguments in turn.

a. The Scope of a TMDL is Not Limited by Impairment Reports in a 303(d) List

The need to develop TMDLs for a particular water body is prompted by the placement of that waterway on a State's 303(d) list. Both the identification and creation stages of this process are governed by section 303 of the CWA, which provides, in relevant part:

> (A) Each State shall identify those waters within its boundaries for which the effluent limitations required by section 301(b)(1)(A) and section 301(b)(1)(B) are not stringent enough to implement any water quality standards applicable to such waters. . . .
>
> (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.

33 U.S.C. § 1313(d)(1). WASA argues that these two subsections are linked, and that subsection (1)(C)'s direction to set load limits that will protect "applicable" water quality standards restricts establishment of TMDLs to only those uses and criteria in identified waters "that have first been listed as impaired pursuant to subsection (1)(A)." WASA Cross-Mtn. at 12. Recent 303(d) lists submitted to EPA by the District and Maryland list sediment and TSS pollution as impairing aquatic life in the Anacostia, but say nothing about recreational and aesthetic enjoyment of the watershed. DC, 2006 Integrated Report to the EPA and U.S. Congress app. 3.5, at 8, Ex. 1 to WASA Cross-Mtn., Sep. 18, 2009 [28-1] ("2006 DC 303(d) Report"); Maryland, 2006 List of Impaired Surface Waters and Integrated Assessment of Water Quality in Maryland 58, Ex. 3 to

WASA Cross-Mtn., Sep. 18, 2009 [28-3] ("2006 MD 303(d) Report").[10] Accordingly, WASA maintains that "since the Anacostia has not been listed as impaired for the recreational and use designations due to sediment and TSS," the "applicable" water quality standards to be addressed by the Final TMDL include only those related to aquatic life. *Id*. at 12–13.

WASA's understanding of the interaction between a 303(d) list and the obligation to develop TMDLs cannot be squared with the CWA's plain text. First, WASA's reading of the listing requirements confuses the CWA's instruction to identify impaired waters with an extra-textual obligation to distinguish among water quality standards applicable to such waters. A return to basic grammar is instructive. Subsection (1)(A) is a single independent clause that includes a subject, a verb, and a direct object. Here, the clause directs the "State" to "identify" those "waters." Two prepositional phrases then follow and clarify which "waters" should be identified. The first—"within its boundaries"—limits the waters to those found inside a State's borders, while the second—"for which the effluent limitations . . . are not stringent enough to implement any water quality standards applicable to such waters"— specifies only impaired waters. Obviously, a State must review applicable standards to determine whether a water body is impaired, just as it must review its boundaries to determine whether a water body is within its borders; but as part of the prepositional phrase, "standards" are not another direct object to be identified, but merely modify those direct objects to be identified—in this case, only those "waters" that are impaired. This focus on waters rather than standards is also underscored by the fact that the clause classifies a water body as impaired if *any* water quality standard is violated; in other words, whether one, some, or all of the water quality standards are not met, the water

[10] Both the Maryland and DC 303(d) lists are submitted as part of an integrated reporting option that permits a State to merge a 303(d) list with information provided as required under § 305(b) of the Act. 40 C.F.R. § 130.8(b)(2). This distinction is important: placement of a water body on the 303(d) list—not any information included in a 305(b) report—is what triggers a State's duty to develop a TMDL to ensure compliance with applicable water quality standards. *Bravos v. Green*, 306 F. Supp. 2d 48, 51 (D.D.C. 2004).

body is impaired and therefore must be listed. In short, the clause instructs a State to identify *those* waters *for which* water quality standards are not met—not to identify *those* standards.

Second, even if subsection (1)(A) could be read to require identification of particular water quality standards, nothing in this provision can be read to imply that where a water quality standard is not "impaired," it is no longer "applicable" to the water body. Indeed, subsection (1)(A) references all water quality standards "applicable *to such waters*." *Id*. (emphasis added). A water quality standard is "applicable" to a particular water body if the particular designated uses and water quality criteria that form that standard apply to the water body under state law. Nowhere is it written that once a water quality criterion is attained and a designated use protected, that water quality standard is no longer "applicable."

Third, subsection (1)(C) requires the creation of TMDLs "for the waters identified in paragraph (1)(A)…[and] at a level necessary to implement the applicable water quality standards." 33 U.S.C. § 1313(d)(1)(C). This provision mirrors the language of subsection (1)(A), as the direct objects for the action—here, development of TMDLs—are "waters" identified in subjection (1)(A) and not particular water quality standards. Also similar is the use of "applicable" rather than "impaired"—load levels must be set to satisfy "applicable water quality standards." In this context, the proper function of the term "applicable" is to narrow designated uses and water quality criteria from all possible standards to those specified as applicable to the water body under state law. The TMDL provision thus requires the development of pollutant limits *for* identified waters that *satisfy* applicable water quality standards, rather than TMDLs *for* particular standards.

Fourth, WASA's tortured interpretation of "applicable" in subsection (1)(C) is unsupported by any link between subsections (1)(A) and (1)(C). As an initial matter, the

suggestion that "applicable" water quality standards in subsection (1)(C) are only those identified in subsection (1)(A) presupposes that subsection (1)(A) requires identification of the particular water quality standards that are impaired[11]—which is incorrect. *Supra*. And to the extent that "applicable water quality standards" in subsection (1)(C) should be understood in reference to subsection (1)(A), as WASA urges, subsection (1)(A) does not distinguish between impaired and non-impaired water quality standards, but specifies "*any* water quality standards applicable *to such waters*." 33 U.S.C. § 1313(d)(1)(A) (emphasis added). Reading these provisions together clarifies that subsection (1)(C)'s direction to develop TMDLs incorporates a requirement to protect *any* water quality standards that, under state law, are applicable to the water body in question. This reading is not only consistent with the parallel language employed in the two subsections' mandates to identify impaired "waters" and then develop TMDLs for those identified "waters," *see Martini v. Fannie Mae*, 178 F.3d 1336, 1345 (D.C. Cir. 1999) (explaining that statutes should be interpreted by reference to language and entire structure), but is also in line with the CWA's "ambitious and comprehensive" scope. *Kingman Park*, 84 F.2d at 1. By contrast, WASA's cramped reading of § 303(d)—which transforms the requirement to identify waters and develop TDMLs for waters into a requirement to identify and develop TMDLs for particular water quality standards—is antithetical to the Act's holistic "goal of restoring and maintaining the chemical, physical and biological integrity of the nation's waters." *Am. Coke & Chem. Inst. V. EPA*, 452 F.3d 930, 943 (D.C. Cir. 2006).

Finally, even if WASA were correct that subsections (1)(A) and (1)(C) only obligate a State to identify impaired water quality standards and develop a TMDL to address those specific

[11] This same confusion can be seen in WASA's own briefing, which describes a "mandate that a *water body* first be listed as impaired…before the states and EPA are required to establish a TMDL," WASA Cross-Mtn. at 12 (emphasis added), and then immediately thereafter conflates that statutory requirement to identify *waters* with the issue of whether a particular *use* has been listed as impaired. *Id.* at 13.

standards, its proposed interpretation would still fail because it improperly substitutes "designated uses" for "water quality standards." The term water quality standard encompasses all designated uses of a water body and all water quality criteria that define pollutant levels necessary to protect those uses. *Supra* Section IV.A.1; *see also* 33 U.S.C. § 1313(c)(2)(A) (including "designated uses" as part of water quality standards). In this sense, designated uses are not equivalent to water quality standards, but are instead components of such standards. *Cf. NRDC v. EPA*, 16 F.3d 1395, 1400 (4th Cir. 1993) ("To adopt these [water quality] standards, States must first classify the uses for which the water is to be protected, such as fishing and swimming, and then each State must determine the level of water quality necessary to protect those uses."). The definition of water quality standard promulgated by EPA could not be clearer on this point: "A water quality standard 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." 40 C.F.R. § 130.3 (emphasis added). And the principle enunciated in *PUD No. 1* is equally instructive. In that case, the defendants attempted to sidestep an impaired designated use, arguing that the satisfaction of relevant water quality criteria is sufficient to meet applicable water quality standards. The Court rejected that position, concluding that water quality standards encompass "*both* components, namely the designated use *and* the water quality criteria." *PUD No. 1*, 511 U.S. at 714–15.[12] Thus, subsection (1)(C)'s instruction to develop a TMDL protective of water quality standards is an instruction to determine the pollutant load level necessary to safeguard all designated uses. Had Congress

[12] WASA attempts to distinguish *PUD No. 1*, arguing that the opinion "stands for the proposition that the States can look beyond the adopted water quality criteria when imposing conditions to protect designations that may be impacted because the criteria may not always encompass all the foreseeable impacts from a project or activity." WASA Cross-Mtn. at 15. This reading is too narrow. The Supreme Court in *PUD No. 1* interpreted the meaning of "water quality standard" under §1313(d), and concluded that the term encompasses all water quality criteria and designated uses. 511 U.S. at 714–15. WASA itself concedes that the Supreme Court held that States must "look beyond the adopted water quality criteria." *Id.* Of course, one aspect of looking beyond the water quality criteria is to look at *other* components of water quality standards, such as designated uses.

intended otherwise, it could easily have worded the CWA to require identification of designated uses or water quality criteria that are not being met and to mandate development of TMDLs for such impairments; instead, Congress directed a State to identify "those waters" in which "any water quality standard applicable to such waters" is impaired and create TMDLs for "the [identified] waters." 33 U.S.C. § 1313(d)(1)(A) & (C). The Court's rejection of WASA's argument thus echoes Judge Urbina's identical conclusion in *Friends I*: "Of course, the TMDLs must achieve the [water quality standards] for *all the designated uses* of the Anacostia River." 345 F. Supp. 2d 182, 195 (D.D.C. 2004) (emphasis added).

The Court's interpretation of the CWA is also consistent with regulations concerning the creation of 303(d) lists and the development of TMDLs for waters identified on such submissions. EPA regulations governing the listing of impaired waters provide:

> Each State shall identify those water quality-limited segments[13] still requiring TMDLs within its boundaries for which (i) Technology-based effluent limitations . . . (ii) More stringent effluent limitations (including prohibitions) required by either State or local authority . . . and (iii) Other pollution control requirements . . . are not stringent enough to implement any water quality standards (WQS) applicable to such waters.

40 C.F.R. § 130.7(b)(1). Mirroring the language of subsection (1)(A), this provision requires a State to identify the *waters* that do not meet "applicable" standards. *Id.* Nothing in this provision, however, requires a State to further subdivide its 303(d) list by identifying particular designated uses that are impaired. Quite the contrary, § 130.7 explains that, "for purposes of listing waters," the term "water quality standard applicable to such waters" means "those water quality standards established under section 303 of the Act, including numeric criteria, narrative

[13] EPA regulations define "water quality limited segment" as any portion of a water body "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." 40 C.F.R. § 130.2(j). To spare the reader yet another abbreviation in an already over-abbreviated discussion, the Court will simply refer to WQLSs as those waters identified under §1313(d)(1)(A).

criteria, *waterbody uses*, and antidegredation requirements." *Id.* § 130.7(b)(3) (emphasis added). Consistent with the CWA, this provision references water quality standards "established" under § 303 of the Act—not standards identified as impaired on a State's 303(d) list. And under § 303, water quality standards incorporate by definition *all* designated uses of a particular water body. 33 U.S.C. § 1313(c)(2)(A).

WASA, however, points to EPA regulations stating that "TMDLs shall be established at levels necessary to attain and maintain the applicable narrative and numerical WQS," *id.* § 130.7(c)(1), to support its contention that there is no regulatory requirement "that TMDLs address all designated uses." WASA Reply in Support of Cross-Mtn. for Summary Judgment 7–8, Oct. 28, 2009 [41] ("WASA Reply"). As an initial matter, this interpretation of EPA's regulation is inconsistent with the CWA's plain meaning, which requires a TMDL to address all "applicable water quality standards," 33 U.S.C. § 1313(d)(1)(C)—meaning "*any* water quality standard applicable to such waters," *id.* § 1313(d)(1)(A) (emphasis added), inclusive of all designated uses. *Id.* § 1314(c)(2)(A). As the Supreme Court made clear, "under the literal terms of the statute, a project that does not comply with a designated use of the water does not comply with the applicable water quality standards." *PUD No. 1*, 511 U.S. at 715; *see also Friends I*, 346 F. Supp. 2d 182, 195 (D.D.C. 2004). Thus, to the extent WASA properly interprets this regulation as permitting TMDLs that do not address all applicable designated uses, the provision is contrary to the CWA and invalid. *See Orion Reserves Ltd. P'ship v. Salazar*, 553 F.3d 697, 703 (D.C. Cir. 2009) ("[A] regulation contrary to a statute is void.").[14] WASA's attempt to read

[14] Notably, EPA does not express any hint of agreement with WASA's reading of its regulations. The Court observes this fact not to suggest, as plaintiffs urge, that EPA's abstention requires the Court to ignore the argument, but simply to emphasize that EPA does not appear to defend 40 C.F.R. § 130.7 as an interpretation that permits States to ignore *all* designated uses and focus *only* on those listed as impaired by a particular pollutant in the State's 303(d) list when developing a TMDL. And while such an interpretation by EPA might be entitled to deference if the Court were to conclude that § 303(d) of the CWA is ambiguous—which it does not—WASA's parsing of isolated regulatory language is not similarly privileged. *See Nat'l Mining Ass'n v. Fowler*, 324 F.3d 752,

out designated uses from water quality standards as used in § 130.7(c)(1) also ignores EPA's instruction—in this same provision—that "[d]eterminations of TMDLs shall take into account critical conditions for stream flow, loading and *water quality parameters*." 40 C.F.R. § 130.7(c)(1) (emphasis added). In contrast to WASA's conflicting and unduly narrow reading of § 130.7(c)(1), the Court finds that the phrase "applicable narrative and numeric WQSs," 40 C.F.R. § 130.7(c)(1), is easily harmonized with the CWA and its implementing regulations by reference to EPA's explanation elsewhere that "water quality criteria" are "based upon" designated uses. *Id*. § 130.2(d). As EPA regulations make clear: "When criteria are met, water quality will generally protect the designated use." *Id*. § 131.3(b). Because water quality criteria are measurable baselines—compared to less-tangible concepts such as designated uses—a State is apt to focus on these criteria when developing pollutant load limits for a TMDL, comforted in the knowledge that attaining these criteria will generally ensure protection of the designated uses. Thus, the use of the phrase "narrative and numeric WQSs" is best understood to instruct the State to consider *all* water quality criteria—narrative or numeric—to ensure that *all* designated uses are preserved.[15]

Finally, WASA quotes a single sentence from 65 pages of EPA guidance stating that a State may sub-categorize its 303(d) list to "show that some designated uses of a water are being attained and some designated uses are not." EPA, Memorandum: Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of

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757 (D.C. Cir. 2003) (observing that federal, state, and local officials not responsible for the promulgation of particular regulations "receive no deference in interpreting" such regulations).

[15] A related point is worth making. Even if WASA was correct that the phrase "narrative and numeric WQSs" permits a State to ignore designated uses when developing a TMDL—a conclusion with which the Court does not concur—the fact remains that narrative and numeric water quality criteria are linked to specific designated uses. *Supra*. WASA points to no language in either the CWA or its implementing regulations—because there is none—that would permit a State to ignore certain water quality criteria. Thus, even if § 130.7(c)(1) permits the District and Maryland to ignore recreational and aesthetic uses when developing the sediment/TSS TMDL for the Anacostia, under no circumstances would that interpretation also permit them to ignore the narrative and numeric water quality criteria tied to those uses under state law.

the Clean Water Act, July 29, 2005, *available at* http://www.epa.gov/owow/tmdl/2006IRG/report/2006irg-report.pdf ("2006 Guidance"). According to WASA, this guidance permits a State to list pollutants as only affecting certain designated uses, "thereby limiting their TMDL obligations and those of EPA to the listed use impairments." WASA Reply at 9. This is incorrect. As an initial matter, to the extent WASA's reading of this guidance is proper, its interpretation would be inconsistent with the CWA's plain language and therefore unworthy of deference. *Adams v. Bell*, 711 F.2d 161, 184–85 (D.C. Cir. 1983). Moreover, even a cursory review of the 2006 Guidance negates the implications divined by WASA. Perhaps most critically, the *very sentence* at issue states that sub-categorizations in the 303(d) list are optional. 2006 Guidance at 6. The Court will not hold that a one-line description of an "optional" categorization in a 303(d) list authorizes a State—at its own discretion—to fundamentally alter its burdens in developing TMDLs under the CWA. *Cf. Interstate Natural Gas Ass'n of Am. V. FERC*, 285 F.3d 18, 59 (D.C. Cir. 2002) (explaining courts' reluctance to review "tentative agency positions" because they lack "present binding effect"). WASA's argument is further undermined by a related footnote in the 2006 Guidance emphasizing that States "determine their section 303(d) list . . . consistent with 40 C.F.R. § 130.7(b)(3)." *Id*. at 6 n.2. That regulatory provision defines applicable water quality standards as those developed under § 303 of the Act, which includes all designated uses. 40 C.F.R. §§ 130.7(b)(3) & 131.3. In addition, the 2006 Guidance goes on to explain that States should list waters in one of five categories, including Category 4, which consists of waters where "at least one designated use is not being supported . . . but a TMDL is not needed," and Category 5, which includes waters where "at least one designated use is not being supported . . . and a TMDL is needed." 2006 Guidance at 7. Here, Category 5 may be applicable; however, nothing in EPA's discussion of how to create a

Category 5 listing so much as suggests that a State that lists only a particular designated use as impaired is relieved of its obligations to address all designated uses through TMDLs. *See generally id*. Also troubling is that the District's and Maryland's 303(d) lists do not comply with the categorization system envisioned in the 2006 Guidance, which directs a State to identify whether that contaminant *is* or *is not* impairing each particular designated use. *Id*. at 49. The lists submitted by the District and Maryland *only* indicate that sediment and TSS pollution *is* impairing uses related to aquatic life, and say nothing with respect to recreational and aesthetic uses. 2006 DC 303(d) Report at app. 3.5, at 8; 2006 MD 303(d) Report at 58. Just as a State "cannot immunize itself from the CWA's important TMDL provisions through the simple expedient of refusing to submit TMDL calculations," *Kingman Park*, 84 F. Supp. 2d at 6, it cannot similarly frustrate the Act by ignoring certain designated uses on its 303(d) list. Unsurprisingly, no party to this litigation contends that sediment and TSS pollution is not also impairing recreational and aesthetic uses of the Anacostia.[16]

In sum, the CWA and EPA regulations require that a State's 303(d) list identify those waters which have failed, and will continue to fail, to attain applicable water quality standards, and are clear that the development of TMDLs depends on whether a water body is listed. *Bravos v. Green*, 306 F. Supp. 2d 48, 51 (D.D.C. 2004). And though a State may include additional information in its 303(d) list, nothing in either CWA or EPA regulations requires the State to provide such information or otherwise directs that doing so will alter the State's TMDL-related obligations. Thus, by listing the Anacostia River as impaired and including it on their 303(d) lists, Maryland and the District triggered an obligation to develop TMDLs for pollutants that set

[16] Indeed, throughout its briefing before the Court, WASA is consistently careful to state only that recreational and aesthetic uses are not *listed* as impaired because of sediment and TSS pollution, and not to address whether DC and Maryland have determined that recreational and aesthetic uses of Anacostia are not *actually* impaired by such contamination.

load limits necessary to protect *all* water quality standards specified under state laws as applicable to the river—including all designated uses.

b. Partial-TMDLs are Not Permitted under the CWA

Municipal Intervenors separately argue that even if the CWA requires that TMDLs address all water quality standards, a State is empowered to focus on particular subsets of uses and criteria to create partial-TMDLs. This position relies on the CWA's mandate that a State develop a priority list to determine the order in which it should develop needed TMDLs. According to Municipal Intervenors: "Even if the Anacostia were listed as being impaired for recreational uses due to TSS/Sediment, the statute expressly allows EPA to prioritize the TMDLs which it prepares," and thus, "[t]he States' and EPA's decision to formally address aquatic life in the Final TMDL, with recreational use issues addressed implicitly, was a clearly rational decision." Municipal Cross-Mtn. at 6–8. The Court disagrees.

Section 303(d)(1)(A) of the CWA, which governs the creation of both 303(d) lists and priority rankings, calls only for a priority ranking of impaired water bodies—it does not envision the ranking of particular impairments within a single water body. The provision reads:

> Each State shall identify those waters [not meeting water quality standards.] 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.

33 U.S.C. § 1313(d)(1)(A). The key clause in this statutory provision directs a State to develop a priority list "*for* such waters, *taking into account* the severity of the pollution and the uses." *Id.* (emphasis added). In the common parlance, creating a ranking "for" a set of objects requires the generation of a list "with respect to" or "concerning" those objects. Merriam Webster's Collegiate Dictionary 161 (11th ed. 2004). Thus, if one places a set of movies on a shelf in order of preference, one creates a ranking *for* those movies. The phrase "taking into account," by

contrast, is understood as evaluating or considering certain reasons for an action. *See id*. at 10 & 1282 (defining "take" as "consider" and "account" as "reasons for an action" or "basis"). Thus, when placing the movies on the shelf, one might *take into account* the actors, the dialogue, and the cinematography in each film to place them in order. Section 303(d)(1)(A), properly understood, thus directs a State to rank the waters on its 303(d) list by evaluating factors such as pollution levels and designated uses—it does not command prioritization among particular pollutants or uses within a single water body. To return to our shelving exercise, the placement of a movie in a particular spot on the shelf would permit one to comment on the overall quality of the acting in that film compared to those movies placed above or below it; the placement would not, however, say anything about the quality of the individual actors within a particular film vis-à-vis each other. Municipal Intervenors' contrary interpretation thus ignores the clear distinction between the task of preparing the list *for* impaired waters and the task of *taking into account* factors such as pollution and designated uses when preparing the list.

This reading of § 303(d)(1)(A) is confirmed by the repeated reference to "waters" throughout that provision. The use of the plural form is evidence that Congress intended the priority requirement—like the listing requirement—to apply *across all* waters. Had Congress intended to specify that the priority list rank pollutants and uses *within a single* water body, it could have required a State to identify those "waters" not meeting water quality standards in the listing clause, and then directed the State to develop a priority list for "each water body" in the ranking clause. It did not do so, however—despite the fact that Congress demonstrated an ability to specify the singular form elsewhere in the CWA. *See, e.g.*, 33 U.S.C. § 1314(a)(1) (referring to single "body of water"). Instead, Congress envisioned that a State would develop a priority list of waters identified in its 303(d) list by comparing the relative states of those waters; for

example, a heavy-traffic river with significant human contact impaired by fecal matter would be a higher-priority candidate for an immediate TMDL than a low-volume waterway with minimal plant or animal life that is designated only for navigation and is impaired by non-toxic TSS. Congress simply did not, as Municipal Intervenors urge, authorize a State to adopt a piecemeal approach to water quality by drawing distinctions among different designated uses for the creation of partial-TMDLs. *Cf. Am. Coke & Chems.*, 452 F.3d at 943 (noting that "the purpose of the CWA is to achieve the complete elimination of all discharges of pollutants").

This broad, water-based approach to prioritization fits nicely with the TMDL provision of the CWA. The relevant clause of that provision states:

> 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 304(a)(2) of this title as suitable for such calculation.

Id. The phrasing of this subsection is clear: A TMDL is established for *waters* and not for *designated uses*. *Supra*. A ranking for all the designated uses of a particular water body is of little or no utility in the face of the obligation to develop a single TMDL that addresses all of those designated uses. By contrast, a priority ranking among impaired waters directly aids the State by specifying the next water body for which it must develop a TMDL. This reading is also consistent with the placement of the phrase "in accordance with the priority ranking" in § 303(d)(1)(C), which follows the reference to the waters identified in a State's 303(d) list.[17]

Nor is there a basis for Municipal Intervenors' prioritization argument in EPA regulations. As an initial matter, EPA regulations concerning the ranking of impaired waters

[17] Moreover, the term "designated uses" does not even appear in the clause referencing the priority ranking. Municipal Intervenors' argument thus reads additional language into the text, as the Court would need to read this provision as requiring, for the waters listed and in accordance with the priority ranking *of designated uses*, a TMDL. The Court declines to follow Municipal Intervenors down this path.

largely mimic the language and structure of the CWA itself, and thus the Court's interpretation of the Act applies with equal force to its implementing regulations. *See* 40 C.F.R. § 130.7(b)(1) (stating that 303(d) list "shall include a priority ranking *for* all listed water[s], *taking into account* the severity of the pollution and the uses to be made of such waters") (emphasis added). And where the regulations do differ from the CWA, they weigh in against Municipal Intervenors' position. For example, two separate regulatory provisions add an additional command that priority rankings include "the identification of waters targeted for TMDL development in the next two years," 40 C.F.R. § 130.7(b)(4); *see also id*. § 130.10(b)(2) (requiring State to submit to EPA "the priority ranking including waters targeted for TMDL development within the next two years.")—a reporting requirement consistent with lists that are made up of waters rather than pollutants in, or designated uses of, a single water body. At a minimum, therefore, EPA regulations are consistent with the Court's interpretation of the CWA and do not provide any contrary support for Municipal Intervenors' position.[18]

Absent statutory or regulatory support, Municipal Intervenors point to previous EPA-approved TMDLs to argue that a requirement to address all designated uses "is completely inconsistent with decades of implementation of both the listing and TMDL development aspects of the national impaired waters program." Municipal Cross-Mtn. at 8. Momentarily setting aside the dearth of EPA regulations or guidance endorsing partial-TMDLs, a number of TMDLs that Municipal Intervenors reference are not entirely consistent with this assertion. For example, EPA's decision approving a TMDL for fecal coliform bacteria in the Anacostia focused only on the District's Class A and Class B recreational and aesthetic uses, but explained that this was because "standards for fecal coliform *only* apply to Class A and B uses since exposure to bacteria

[18] As with the separate position advanced by WASA concerning the relationship between 303(d) lists and TMDLs, EPA does not appear to join Municipal Intervenors' prioritization argument.

is normally expressed through illnesses related to human contact." EPA, Decision Rationale for TMDLs for Fecal Coliform Bacteria 21 n.21, Oct. 16, 2003, *available at* http://ddoe.dc.gov/ ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/tmdl_decision.pdf (emphasis added). Similarly, EPA's decision approving a TMDL for dissolved oxygen in the Anacostia relies on water quality criteria for the District's Class C use, but this was because EPA "does not consider that low dissolved oxygen levels, in and of themselves, affect primary and secondary recreational uses." EPA, Decision Rationale for TMDLs for Biochemical Oxygen Demand, 22 n.14, *available at* http://ddoe.dc.gov/ddoe/frames.asp?doc=/ddoe/lib/ddoe/tmdl/ amend_ana_om.pdf. In both cases, EPA explicitly found that certain pollutants have no effect on particular designated uses, and an implicit result of that finding is that the TMDL necessarily sets a pollutant load limit protective of such uses. Here, by contrast, neither the District, Maryland nor EPA suggests that sediment and TSS pollution has no detrimental effect on contact and secondary recreation in the Anacostia, and so there is no basis for setting aside these designated uses when developing the sediment/TSS TMDL. More fundamentally, even if Municipal Intervenors are correct that the use of partial-TMDLs is EPA-approved policy—and the Court is not convinced that this is so—that practice is contrary to the CWA and its implementing regulations, and is therefore without legal effect. *See Central Laborers' Pension Fund v. Heinz*, 541 U.S. 739, 748 (2004) (holding that "neither an unreasoned statement in the manual nor allegedly longstanding agency practice can trump" clear statutory commands or formal agency regulations).

Finally, Municipal Intervenors appeal to policy, insisting that a prohibition on partial-TMDLs would call into question "literally thousands" of existing TMDLs. Municipal Cross-Mtn. at 9. This protest rings hollow. As an initial matter, to the extent EPA does in fact endorse the partial-TMDL practice, the Court "cannot rewrite the Clean Water Act" to accommodate an

EPA interpretation that the Agency itself has not promulgated. *Friends II*, 446 F.3d at 146. In any event, the Court is unconvinced that today's holding will have the explosive effects that Municipal Intervenors theorize. TMDLs are not self-implementing documents, but informational tools upon which federal, state, and local agencies can rely to implement effective pollution controls. *NRDC v. Muszynski*, 268 F.3d 91, 94 (2d Cir. 2001). The purported burden this opinion might place on States, therefore, is not to immediately implement costly or onerous pollution controls, but merely to review and determine what reductions of certain pollutants are necessary to protect all designated uses and meet all water quality criteria.[19] Moreover, the Court is not persuaded that the differences in the proper approach and a partial-TMDL strategy result in any increased burden on the States. Under Municipal Intervenors' partial-TMDL approach, a State is not relieved from developing subsequent TMDLs to protect designated uses that are not implemented through the initial TMDL—after the first partial-TMDL, the burden on the State to monitor water quality and determine when additional TMDLs become necessary remains. And under the proper interpretation, nothing requires EPA to unwind the "thousands" of TMDLs it has previously approved. Instead, each State must simply continue to evaluate its waters when submitting 303(d) lists and report whether a water body does not, or is not otherwise expected to, meet applicable water quality standards in light of, *inter alia*, "[o]ther pollution control requirements." 40 C.F.R. § 130.7(b)(3). Included among such "other"

[19] Municipal Intervenors present a hypothetical in which "a water is impaired for copper for aquatic life purposes," and argue that under the Court's reading of the CWA and its implementing regulations, EPA would have to "develop at least two (if not more) TMDLs . . . . The first TMDL would be for copper for aquatic life purposes [and t]he second would be for human health purposes [even though t]his standard might not be violated at all." Municipal Cross-Mtn. at 8 n.7. This is incorrect. The sole requirement elucidated in the Court's opinion is that a TMDL must address the water quality standards applicable to a water body, which inherently incorporates all designated uses and all water quality criteria. In Municipal Intervenors' hypothetical, a State need not develop multiple TMDLs, but must simply determine the maximum concentration of copper allowable that will protect both aquatic life *and* recreational uses, and implement that load level in a single TMDL. *NRDC v. EPA*, 16 F.3d at 1406. And, consistent with past EPA practice discussed above, *supra*, where evidence shows that copper has no detrimental effect on recreational uses, EPA need only establish this fact to demonstrate that the load reduction to protect aquatic life will also protect recreational enjoyment of the water body, as required under the CWA.

requirements are prior TMDLs; indeed, EPA's 2006 Guidance explicitly contemplates situations in which a TMDL has been implemented but may not be sufficient to achieve all water quality standards—even where it was so intended. 2006 Guidance at 57. Thus, to the extent a State has developed and implemented a prior TMDL—whether it was a partial-TMDL designed only to protect certain designated uses or a full TMDL that is simply insufficient—that State's burden is the same: continue to monitor compliance with all water quality standards, and, if they are not met, develop a new TMDL to address these shortcomings.

* * *

Based on the foregoing discussion, the Court holds that when developing a TMDL for a particular pollutant, the CWA and its implementing regulations require the State—in devising the TMDL—and EPA—in reviewing the proposed TMDL—to evaluate whether the load levels, once implemented, will protect all applicable water quality standards, including all designated uses and all water quality criteria. *See Am. Paper*, 996 F.2d at 349 ("The water quality standards that emerge from this state/federal *pas de deux* have two primary components: designated 'uses' for a body of water . . . and a set of 'criteria' specifying the maximum concentration of pollutants that may be present in the water without impairing its suitability for designated uses."). The Court now turns to whether EPA's decision approving the Final TMDL satisfies these statutory and regulatory requirements.

2. EPA's Approval of the Final TMDL's Load Limits

Plaintiffs offer three specific objections to EPA's conclusion in its Decision Rationale that the Final TMDL sets load levels necessary to achieve all water quality standards applicable to the Anacostia. First, plaintiffs argue that there is no evidence in the record to support EPA's suggestion that the Final TMDL will protect recreational and aesthetic uses. Second, plaintiffs insist that the maximum loads for sediment and TSS pollution improperly permit periodic

violations of relevant water quality criteria. Finally, plaintiffs object to the reliance, in both the Final TMDL and EPA's Decision Rationale, on the District's Secchi depth criterion as the key target for water clarity. With respect to each of these contentions, the role of the Court is not to review the merits of EPA's decision, but solely "to determine whether or not as a matter of law the evidence in the administrative record permitted the Agency to make the decision it did." *Cape Cod Hosp. v. Sebelius*, 677 F. Supp. 2d 18, 29 (D.D.C. 2009) (quotations omitted). The Court discusses each of plaintiffs' objections in turn, and, for the reasons set forth below, concludes that EPA's determination that the Final TMDL complies with the CWA and implementing regulations is arbitrary and capricious.

a. There is Insufficient Evidence in the Record to Support EPA's Suggestion that the Final TMDL Protects All Designated Uses

In the above discussion, the Court held that a TMDL for a particular pollutant must be designed to implement all water quality standards applicable to the water body in question. Accordingly, the question for the Court is not, as a matter of fact, whether the limits on sediment and TSS pollution set by the Final TMDL actually protect recreational and aesthetic uses of the Anacostia, but whether, as a matter of law, EPA properly exercised its discretion in finding that the Final TMDL achieves these standards. The Court finds that it did not.

In determining how to best protect the Anacostia River, Maryland and the District relied heavily on the Chesapeake Bay Program ("CBP") for guidance. *See* Final TMDL at 22 ("Both MD and DC water clarity criteria are based on CBP's determination of light requirements for underwater bay grasses."). According to its website, the CBP was formed in the early 1980s after the Chesapeake Bay became the Nation's first estuary targeted for restoration by Congress. CBP, *History of the Chesapeake Bay Program, available at* http://www.chesapeakebay.net/historyofcbp.aspx?menuitem=14904. The CBP was subsequently constituted as a coalition

between EPA and the governments of Maryland, Virginia, Pennsylvania, and the District. *Id*. Much of the CBP's mission has been the protection and propagation of submerged aquatic vegetation, or SAV, which are more commonly thought of as underwater grasses. CBP, *Water Clarity*, *available at* http://www.chesapeakebay.net/waterclarity.aspx?menuitem=14656. To promote growth of SAV, the CBP focuses on improving water clarity in the Bay through the removal of excess nutrients, sediments, and TSS. *Id*. In measuring water clarity, the CBP relies on Secchi depth, which measures how deep a "Secchi disk" remains visible from the surface of the water. *Id*. As the Final TMDL explains:

> Secchi depth is a simple measure of water clarity based on the visibility of a "Secchi disk," an eight-inch diameter disk with black and white quadrants. Secchi depth is defined as the depth at which a submerged Secchi disk is no longer visible.

Final TMDL at 14. In the period before submission of the Final TMDL, Maryland and the District—relying on the CBP—each promulgated new numeric water quality criteria for the protection of SAV based on Secchi depth measurements. Final TMDL at 13–14. Specifically, Maryland adopted a Secchi depth of .4 meters to protect its Designated Use II: Support of Estuarine and Marine Aquatic Life, *id*. at 13, while the District specified that .8 meters Secchi depth is necessary to support its Class C: Protection & Propagation of fish, shellfish and wildlife uses. *Id*. at 14. EPA subsequently approved these new criteria. DR at 21.

The development of the Final TMDL relied explicitly on these new water quality criteria. Specifically, the Final TMDL declares that its objectives "are 1) to ensure that aquatic life is protected in the tidal and non-tidal waters of the Anacostia River; 2) to ensure that MD's and DC's sediment-related water quality standards that support aquatic life are met in their respective portions of the river; and 3) to ensure in particular that the numeric criteria for water clarity are met in the tidal waters." Final TMDL at 25. Observing that "[t]he health of [SAV] beds is an

important indication of water quality conditions in the tidal Anacostia" because "SAV depends on good light conditions," *id*. at 18, the Final TMDL relies entirely on criteria for the protection of SAV by defining the Secchi depth criteria promulgated by the District and Maryland as the sole target for the load reductions in the Final TMDL.[20] Recognizing that the proposed load limits' narrow focus on SAV-related criteria could fail to ensure that other designated uses are adequately protected, plaintiffs submitted the following comment to the draft TMDL: "[T]here is no evidence in this Draft TMDL that the load reductions needed to achieve water clarity that is protective of SAV will also be sufficient to protect other forms of plant and animal life . . . nor that such clarity is sufficient to fully support the river's recreational and aesthetic designated uses." Earthjustice Comments at 1–2. The Final TMDL, however, does not address this objection, and EPA subsequently relies upon the Final TMDL's CBP-related criteria to conclude that the chosen load levels would implement applicable water quality standards. DR at 21–23.

Throughout its Decision Rationale, EPA remains silent as to water quality standards related to recreational and aesthetic uses, despite those standards' applicability to the Anacostia under both DC and Maryland law. Indeed, the Agency concedes as much before the Court: "Although EPA did not attempt to quantify what TSS target would be necessary to meet the applicable aesthetic and recreational water quality standards, . . ." EPA's Reply in Support of Cross-Motion for Summary Judgment, Oct. 28, 2009 [38] ("EPA Reply"). Instead, the Decision Rationale repeatedly declares that the goal of the Final TMDL is to promote and protect aquatic life by satisfying the District's .8 meter Secchi depth criterion. *See* DR at i (noting that Final TMDL establishes loads for sediment that "ensure that aquatic life is protective," meet

[20] Because the District's Secchi depth criterion is more stringent than the depth adopted by Maryland, the Final TMDL uses the District's chosen depth as the target criterion when developing maximum loads throughout the watershed. *See* Final TMDL at 22 ("Analyses done for this TMDL show that sediment load reductions required to meet the District's water clarity criterion for DC tidal waters are significantly larger than load reductions required to meet MD's water quality standards for sediment related to aquatic life in the Anacostia watershed. . . . DC's water clarity criterion for tidal waters is [therefore] the standard that will determine the TMDL load reductions.").

"sediment-related water quality standards that support aquatic life," and attain "the numeric criteria for water quality" promulgated by DC); *id*. at 3 ("[T]he TMDLs submitted by the District and Maryland were developed to address two issues; 1) the TSS (the District) and sediment (Maryland) impairments of aquatic life . . . and 2) consistency with the 2006 holding of the D.C. Circuit [in *Friends II*] that TMDLs be expressed as daily loads."); *id*. at 25 (noting that Final TMDL's objective "was to determine what reductions in suspended sediment loads . . . result in water clarity improvements sufficient *to support growth of SAV* by meeting the water clarity standards of Maryland and [DC] . . . i.e., a seasonal median Secchi depth of .4 meters in Maryland . . . and .8 meters in the District.") (emphasis added). As a result of this narrow focus, the Agency's decision does not discuss several elements of both DC and Maryland water quality standards. For example, Class A and Class B designated uses under DC law—which concern recreational and aesthetic uses—are not defined or discussed at any point in the Agency's decision; instead, EPA relies exclusively on a measure of water quality—Secchi depth—that is unrelated to recreational or aesthetic uses of the Anacostia under either Maryland or DC law. In short, EPA simply does not consider whether the Final TMDL would protect designated uses or satisfy water quality criteria related to recreational or aesthetic uses in the Anacostia River. The Agency's own words could not be clearer on this point: "[I]mpairment of other beneficial water uses such as primary recreation (swimming) and secondary (boating) contact recreation was neither the focus of the listed impairment nor the goal for these TMDLs." DR at 3.[21]

These omissions are fatal. EPA is obligated under the CWA and its implementing regulations to consider whether a TMDL will implement all designated uses and meet all water

[21] Nor can EPA rely on the Final TMDL itself, as that document repeatedly fails to address several aspects of applicable water quality standards. For example, the Final TMDL (1) only mentions Class C designations under DC law, (2) fails to discuss or evaluate certain numeric water quality criteria applicable under both Maryland and DC law, and (3) specifies only "protection of aquatic life" as the applicable narrative criteria under DC law, without mentioning other narrative criteria related to other designated uses as set forth in DC law.

quality criteria before granting its approval. And where the Agency determines—through exercise of its expert judgment and scientific review—that a proposed TMDL will meet all applicable water quality standards, the Court will generally defer to that judgment. But where EPA simply ignores some applicable water quality standards by, for example, failing to consider certain designated uses or ignoring particular water quality criteria, it acts outside the scope of its legal and regulatory authority, and must be rebuked. *See United States v. FCC*, 652 F.2d 72, 120 (D.C. Cir. 1980) ("An agency impermissibly exceeds the bounds of administrative discretion when it fails to adhere to the procedures specifically mandated by statute."); *see also Crawford v. FCC*, 417 F.3d 1298, 1297 (D.C. Cir. 2005) ("An agency's failure to follow its own regulations is fatal to the deviant action.") (quotations omitted). The Court simply cannot—and will not—uphold EPA's decision to approve a TMDL without evaluating applicable water quality criteria or considering whether the loads adopted will protect all designated uses, absent some reasoned explanation, at the time of that action, as to why EPA exercised its discretion in such a manner. *See Motor Veh. Mfrs.*, 463 U.S. at 50 ("It is well established that an agency's action must be upheld, if at all, on the basis articulated by the agency itself.").

In light of its selective omission of water quality standards in its Decision Rationale, EPA expends significant effort before the Court explaining what it *might have* decided based on the record. For example, EPA notes that the District's narrative criteria "are based upon words and phrases, such as 'objectionable' and 'aesthetic,' that require the exercise of agency judgment at a more fundamental level," and argues that the Court should defer to the Agency's reasoned judgment that the Final TMDL satisfies the narrative criteria. EPA Reply at 8. The Court, of course, would be happy to rely upon the Agency's scientific evaluation of whether such sediment and TSS load reductions are sufficient to implement applicable narrative criteria under DC and

Maryland law. The problem is that the Decision Rationale does not explain what judgment EPA is exercising, the scientific basis for that judgment, or the reasonable conclusions of that exercise. The Court will not supply post-hoc rationales for action where the Agency's own Decision Rationale contains none. *Bowman Trans.*, 419 U.S. at 285–86. This is particularly true in this instance, where the DC law requiring the Anacostia be free from "objectionable" turbidity—while quoted frequently throughout both EPA's and intervenors' briefs—is not discussed in either the Final TMDL or the Decision Rationale; indeed, the word "objectionable" *never appears*. It is difficult for the Court to comprehend how EPA could have—as it now insists—exercised its judgment with respect to a narrative criterion that it *never mentions*. "In order to ensure that an agency's decision has not been arbitrary, we require the agency to have identified and explained the reasoned basis for its decision." *Transactive Corp. v. United States*, 91 F.3d 232, 236 (D.C. Cir. 1996). The Final TMDL and EPA's Decision Rationale fall woefully short of this responsibility.

Tacitly acknowledging that it never formally evaluated water quality standards related to recreational or aesthetic uses, EPA seeks refuge in two lines from its Decision Rationale expressing concurrence with "the District's and Maryland's conclusion that the improvement of water quality . . . will *substantially improve, if not achieve* aesthetic, primary and secondary recreation water uses." DR at 3 (emphasis added); *see also id*. (agreeing that "85% reductions . . . *will significantly improve* the water quality and make the river *certainly more desirable* for other uses such as primary and secondary contact recreation") (emphasis added). On their face, however, both statements are severely qualified opinions—no better than quasi-educated guesses—rather than reasoned expressions of the Agency's judgment. The first statement—that the Final TMDL will "substantially improve, if not achieve" water quality—implicitly

acknowledges a failure to determine whether the Final TMDL will actually achieve these standards, while the second merely expresses optimism that the Final TMDL will make the Anacostia "more desirable" for recreational and aesthetic uses. But the CWA and its implementing regulations demand more than imprecise guesses and hopeful utterances; they require that pollutant load limits be set at levels *necessary* "to implement," or "to attain and maintain," water quality standards. 33 U.S.C. § 1313(d)(1)(C); 40 C.F.R. § 130.7.[22] Courts have made abundantly clear that "an agency must cogently explain why it has exercised its discretion in a given manner." *Motor Veh. Mfrs.*, 463 U.S. at 48. Here, EPA has not explained how load levels that will *improve* water quality and make the Anacostia River *more desirable* for recreational or aesthetic uses will actually satisfy water quality standards related to such uses under the law.

Nor can EPA find shelter in explanations provided separately by the District or Maryland—none exist. The only reference to recreational and aesthetic water quality standards made by either jurisdiction is located in their responses to comments concerning the draft TMDL, in which the District and Maryland express their "belie[f] that the 85% reductions of sediment loads called for in the TMDL will significantly improve the water quality and make the river certainly more desirable for other uses such as primary and secondary contact recreation." DC/MD Cmt. Response at 16. This statement, however, constitutes the same non-committal posturing that EPA adopts. And just as with the Agency's Decision Rationale, this response points to no evidence or scientific basis to support the proposition that an 85% reduction is sufficient to protect the recreational and aesthetic uses of the Anacostia. The Final TMDL, for

[22] The Court does not intend to suggest that EPA is required to reach scientific certainty and is not entitled to make expert judgments with respect to unresolvable issues. This is not a case, however, where the Agency diligently reviewed the relevant evidence and—faced with equivocal facts and inconclusive analyses—relied upon its own expertise to reach a reasoned conclusion. In this instance, EPA simply gestured in the direction of a critical issue, offering expressions of hope and optimism. Hope and optimism, however, are not sufficient substitutes for analysis and judgment.

its part, adds absolutely nothing to this discussion. Faced with reasonable concerns expressed by plaintiffs and others, the District's and Maryland's dismissal of such objections in favor of an unsupported "belief" is precisely the sort of "high-handed and conclusory" response the D.C. Circuit has regularly rejected. *Chem. Mfrs. Ass'n*, 28 F.3d at 1265–66; *see also Edison Elec. Institute v. EPA*, 2 F.3d 438, 446 (D.C. Cir. 1993) (dismissing "speculative factual assertions" where "there is no evidence or explanation on the record to justify [such] a conclusion").

In light of the Decision Rationale's obvious shortcomings, EPA pleads for judicial deference and repeatedly points to the complexity and depth of the modeling process to defend its approval of the Final TMDL. The Court does not question the conclusion of those models, which is that the proposed load limits will lead to an 85% reduction in sediment and TSS pollution. But the issue is not the factual matter of whether the Final TMDL will lead to such a reduction—a conclusion to which the Court defers to EPA's finding—but the evaluative question of whether an 85% reduction *will protect the applicable designated uses*. The models, however numerous or complicated, only address the former. This can be seen in EPA's Decision Rationale, which goes to great lengths beyond the models to explain why the 85% reduction will lead to at least .8 Secchi depth throughout the Anacostia River, DR at 13–21, why .8 Secchi depth will lead to increased SAV growth, *id*. at 21–24, and why increased SAV growth will implement the designated uses for the Anacostia related to the protection and support of plant and animal life. *Id*. at 21–22. At the same time, neither the Final TMDL nor the Decision Rationale bothers to explain why the 85% reduction will lead to similar attainment of narrative or numerical water quality criteria related to recreational or aesthetic uses. Under the CWA, it is the District's, Maryland's, and EPA's responsibility to attempt, based on available evidence, to answer this question—not to kick the can down the road. Nor is the simple fact that the Final

TMDL will reduce sediment and TSS pollution by some amount sufficient. One need not possess PhDs in water management and hydro-physics to conclude that a reduction in water contamination—whatever the magnitude—will likely make the Anacostia's waters "better" for recreational and aesthetic enjoyment. If this were all that were required, however, enforcement of the CWA could be left to 20-year old environmental studies majors. The question posed by the CWA—the question that demands the Agency's expertise—is what level of reduction *is necessary* to safeguard all designated uses under state law. In this case, EPA does not even attempt to answer that question. *See* EPA Reply at 7 ("EPA did not attempt to quantify what TSS target would be necessary to meet the applicable aesthetic and recreational water quality standards."). "Judicial deference to decisions of administrative agencies like EPA rests on the fundamental premise that agencies engage in reasoned decision-making." *Am. Lung Ass'n v. EPA*, 134 F.3d 388, 392 (D.C. Cir. 1988). Where, as here, the record is entirely silent on the scientific basis for a critical conclusion, the Court will not transform the Agency's silence into an expression of its expertise. *Tex Tin Corp. v. EPA*, 935 F.2d 1321, 1324 (D.C. Cir. 1991).

Assuming momentarily, however, that EPA's educated guess in its Decision Rationale was in fact a genuine determination that an 85% reduction in sediment and TSS pollution would satisfy all applicable water quality standards, that conclusion lacks any support in the record and is therefore entirely inadequate.[23] Though presenting substantial argument, EPA's briefing points to "no findings and no analysis to justify" a conclusion that the load limits on sediment and TSS pollution set by the Final TMDL will attain and maintain water quality at a level necessary to protect recreational or aesthetic uses of the Anacostia. *Motor Veh. Mfrs.*, 463 U.S.

[23] Courts "do not generally give credence to . . . post hoc rationalizations" for agency action, but instead "consider only the regulatory rationale offered by the agency" at the time of such action. *Gerber v. Norton*, 294 F.3d 173, 184 (D.C. Cir. 2002). The Court is therefore loathe, in light of EPA's patent failure to evaluate whether an 85% reduction is sufficient to meet recreational and aesthetic water quality standards in its Decision Rationale, to consider new arguments in a legal brief, particularly where the Agency offers no new evidence or study in support of its late-hour conclusions.

at 48 (quotations omitted). This is insufficient. To pass muster under the APA, EPA must articulate a "rational connection between the facts found and the choice made." *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962). In this case, such a requirement obligates EPA to link the *fact* that the Final TMDL will lead to an 85% to the *choice* to approve the Final TMDL because it will implement all applicable water quality standards. The Agency has not done so, and the Court is "not prepared to and the Administrative Procedure Act will not permit [it] to accept" such silence. *Id*. (quotations omitted). Equally unsupported by the record is any explanation as to how that 85% reduction would satisfy the narrative water quality criteria linked to recreational or aesthetic uses under DC law, which require that the water be free from "objectionable" turbidity and meet "aesthetic" needs. DC MUN REGS. tit. 21 § 1104.1(c). Notwithstanding that these standards appear nowhere in the Final TMDL, *see* Final TMDL at 23 (displaying Table listing "Designated Uses and Sediment-Related Water Quality Standards for the Anacostia" that does not identify recreational or aesthetic uses and lists "protection of aquatic life" as only relevant narrative criteria), EPA insists that it is not required to translate narrative criteria into specific numeric limits and therefore may rely on the 85% reduction in sediment and TSS pollution to conclude that the narrative criteria are met. EPA Reply at 9–11. While it is true that the CWA and applicable regulations do not mandate the translation of narrative criteria into specific numeric limits, it is equally true that EPA is obligated under both to explain *how* the reduction in load levels will achieve applicable narrative criteria.[24] This could be accomplished,

[24] This is where the Court parts ways with Judge Urbina. In *Friends I*, the district court noted that "[w]here a subjective water quality criteria such as 'objectionable turbidity' has not been translated into a numeric pollution-concentration endpoint, no frame of reference exists against which to compare evidence," and thus concluded that "one cannot say that a 77% reduction will not result in the elimination of objectionable turbidity for recreational and aesthetic use." 346 F. Supp. 2d at 201. But the fact that one *cannot* say that an 85% reduction will not be sufficient to prevent objectionable turbidity does not relieve EPA of its obligation to reasonably conclude that an 85% reduction *will* have the statutorily-mandated effects. The Court is not asking for scientific certainty; but what it does ask—and what the APA demands—is that EPA review available evidence and state its rationale. The burden on the Agency, while minimal, is *on the Agency*. EPA does not state a conclusion, much less attempt to explain why the

for example, by examining the current loads and simulating how the water in the Anacostia would look under implemented loads—which is precisely what was done for criteria related to the protection of SAV and aquatic life, *see* Final TMDL at 33 ("These analyses allow a comparison of baseline conditions (under which water quality problems exist) with TMDL conditions.")—or by studying other waters that do meet such narrative criteria and comparing the level of sediment and TSS pollution in those waters to levels likely to obtain in the Anacostia after the proposed 85% reduction. EPA attempts no such analysis,[25] but rather asks the Court to defer to the agency's "judgment." EPA Reply at 8–11. There can be no dispute, however, that had the Decision Rationale consisted of a single page stating "Based on EPA's judgment, the Final TMDL will meet all water quality standards applicable to the Anacostia River," the Court would not uphold such an action against challenges under the CWA and APA. Yet here, with respect to water quality standards related to recreational and aesthetic uses, EPA has done just that—its 50-page decision says nothing more on the matter and its briefs add no additional evidence or analysis. This is not enough, and the Court will not "defer to agency expertise that was never explained." *Tex Tin Corp.*, 935 F.2d at 1324.

Nor can EPA rely on the Final TMDL's expected achievement of water clarity standards for aquatic life to establish the load limits' efficacy in protecting recreational or aesthetic uses. Under the CWA, water quality criteria are not arbitrary but "based upon [designated] uses," 33

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proposed pollutant levels are sufficient. Faced with an absence of *any* explanation or evidence, the Court will not simply throw up its hands and accept EPA's otherwise-unfounded assertion. *Motor Veh. Mfrs.*, 463 U.S. at 43.

[25] In its reply brief, EPA argues that "[t]he modeling described in the TMDL Report and the Approval Decision is evidence of detailed analysis to ensure that the Anacostia TSS TMDL would meet the District's and Maryland's numeric criteria for water clarity." EPA Reply at 8. The pages of both the Final TMDL and Decision Rationale that the Agency references, however, discuss *only* numeric criteria for the protection of SAV and aquatic life, and do not mention criteria for recreational or aesthetic uses. *See* Final TMDL at 33 (discussing analyses necessary to determine "the maximum average annual sediment load required to support the designated uses related to aquatic life"); Decision Rationale at 17 (specifying "the maximum daily loads of [TSS] necessary to assure that the applicable water quality standard for water clarity of .8 meters Secchi depth will be met").

U.S.C. § 1313(c)(2)(A); specifically, EPA regulations direct a State to set water quality criteria "*necessary* to protect the uses" of a water body. 40 C.F.R. § 130.3 (emphasis added). This link between a water quality criterion and its designated use gives rise to a regulatory presumption: "When criteria are met, water quality will generally protect the designated use." *Id*. § 131.3(b). A necessary corollary of this presumption, however, is that if the targeted criterion is not tied to particular designated uses, achievement of that criterion will not necessarily lead to water quality that supports such uses. In approving the Final TMDL, EPA relies solely on the District's water quality criterion of .8 meters Secchi depth. *See, e.g.*, DR at 23. This reliance, however, poses two significant problems. First, under Maryland and DC law, Secchi depth criteria are tied *only* to the protection of SAV and propagation of aquatic life. MD. CODE REGS. 26.08.02.03-3(C)(9); D.C. MUN. REGS. tit. 21 § 1104.8. Without questioning the Agency's determination that an 85% reduction in sediment and TSS pollution will achieve .8 meters Secchi depth, attainment of that water quality criterion is unrelated to recreational or aesthetic uses and thus says nothing about the protection of such uses. Therefore, no regulatory presumption attaches. Second, though EPA may select a single water quality criterion to govern the creation of a TMDL, 40 C.F.R. § 131.11(a), a necessary requirement is that the chosen criterion will "support the most sensitive use of that particular body of water." *NRDC v. EPA*, 16 F.3d at 1405. Because EPA never reviewed water quality criteria related to recreational or aesthetic uses of the Anacostia, there is nothing in the record to establish that .8 meters Secchi depth is more stringent than these other criteria. Plaintiffs' comments to the draft TMDL are exactly on point: "[T]here is no basis for the claim that D.C.'s seasonal average Secchi depth criterion for protection of SAV in the Class C Designated Use is the most stringent reduction in sediment loads required to meet applicable water quality standards." Earthjustice Comments at 3.[26] A conclusion that a TMDL will achieve

[26] On this point, EPA and the intervenors frequently accuse plaintiffs of questioning the validity of the State

a particular water quality criterion is not equivalent to a conclusion that the TMDL will meet *all* criteria and thus protect *all* designated uses, at least absent a prior finding that this criterion is the most stringent available.[27] In this instance, then, EPA's conclusion that the Final TMDL will achieve .8 meters Secchi depth in the Anacostia is not evidence that the sediment/TSS TMDL will also protect recreational and aesthetic uses by meeting their associated water quality criteria.

Finally, in their response to plaintiffs' comments to the draft TMDL, the District and Maryland indicate that they "will continue to monitor the water quality" and if "it is determined . . . that additional reductions are necessary to attain uses such as primary (swimming) and secondary contact recreation (boating), then the TMDL can be revised." DC/MD Cmt. Response at 16. And in approving the Final TMDL, EPA explains that it "agrees with the plan of Maryland and the District to perform post-TMDL monitoring and take additional steps, as necessary, to address any additional concerns." DR at 3. Though published EPA guidance indicates that a State may choose to implement a TMDL through an "adaptive" or "iterative" process, that guidance is clear that such an approach is only appropriate where "each new phase utilizes *new information* to reevaluate the original TMDL." Environmental Protection Agency, Memorandum: Clarification Regarding "Phased" Total Maximum Daily Loads 4, Aug. 2, 2006, Ex. 7 to EPA Cross-Mtn., Sep. 18, 2009 [27-7] (emphasis added). While a TMDL may (and perhaps should) acknowledge the possibility of future revision upon discovery of new data, the Agency's guidance is not a license to create a first-generation TMDL that is not intended "to

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standards rather than the effectiveness of the Final TMDL, and insist that such a challenge should have been mounted when the District and Maryland submitted these standards to the Agency for review. This argument misses the mark. Plaintiffs do not challenge the conclusion that .8 meters Secchi depth will be sufficient to protect designated uses related to aquatic life, but instead challenge EPA's use of Secchi depth criterion as the target for the Final TMDL to ensure protection of all designated uses. Because plaintiffs' contention is that the Final TMDL's reliance solely on this criterion results in a Final TMDL that sets load levels insufficient to achieve all applicable water quality standards—as required, 33 U.S.C. § 1313(d)(1)(C)—the objection is properly lodged at this time.

[27] EPA does make a finding in the Decision Rationale that the District's criterion of .8 meters Secchi depth is the most stringent criteria among those it has considered, DR at 22, but the Agency *only* considered those criteria related to the protection of aquatic life. *Id*.

attain and maintain the applicable water quality standard," as required. *Id*. at 3. EPA concedes as much. *See* EPA Cross-Mtn. at 19 n.10 ("TMDLs must be calculated to meet water quality standards given EPA's current understanding of the data, but the possibility of revising the TMDL may be part of an implementation strategy."). Here, the "iterative" approach in the Final TMDL is not compensating for a lack of data or uncertainty in the models, but is masking the absence of any determination as to whether the proposed load levels will protect recreational and aesthetic uses of the Anacostia. The Court will not countenance the substitution of a promise to "get to it, eventually" for the statutory requirement that the Final TMDL include load levels "necessary to implement" all water quality standards. 33 U.S.C. § 1313(d)(1)(C).

Under the CWA and applicable regulations, States must develop TMDLs to achieve all applicable water quality standards, and EPA may only approve those TMDLs that it determines are up to this task. In approving the Final TMDL for sediment and TSS pollution in the Anacostia, however, EPA merely expresses its hope that the proposed reductions will do the trick. And even if the Court were to treat the Agency's optimism as a genuine conclusion, the Decision Rationale provides no basis in evidence or reasoned judgment to support such a finding. This is not enough. The Court is reminded of the Supreme Court's venerated observation: "Our recognition of Congress' need to vest administrative agencies with ample power to assist in the difficult task of governing a vast and complex industrial Nation carries with it the correlative responsibility of the agency to explain the rationale and factual basis for its decision, even though we show respect for the agency's judgment in both." *Bowen*, 476 U.S. at 627. With respect to the question of whether the Final TMDL will adequately protect all water quality standards, EPA has failed to shoulder its share of this responsibility, and has thus acted arbitrarily and capriciously.

b. EPA Reasonably Concluded that Periodic Violations of Water Quality Standards are Permissible

According to plaintiffs, the EPA-approved Final TMDL includes maximum daily loads for sediment and TSS pollution that improperly permit periodic violations of applicable water quality standards during high-flow events. Ps' Mtn. at 10–13. In support of this objection, plaintiffs submit a report translating the Final TMDL's proposed daily maximum limits into a measure of sediment and TSS concentration in the Anacostia under various assumptions about water flow, and concludes—at least with respect to high-flow conditions—that the resulting contamination leads to "a Turbidity of 4,000 to 8,000 NTU or greater, which is very, very muddy and . . . totally lacking the sort of water clarity that people find aesthetically pleasing." Barry Sulkin,[28] Memorandum on the Proposed Anacostia TSS TMDL 2, May 7, 2007, AR #20 ("Sulkin Memo"). The Sulkin Memo goes on to explain that "the sediment values likely to be seen at times during higher flows will yield unacceptably muddy water not protective of all recreational and aesthetic enjoyment uses." *Id*. at 3. The question for the Court, in light of this evidence, is whether EPA reasonably concluded that occasional, severe sediment and TSS pollution during high-flow events will not impede the Final TMDL's implementation of all "applicable water quality standards." 33 U.S.C. § 1313(d)(1)(C).[29]

The CWA does not specify a particular time period during which a TMDL must prevent violations of applicable water quality standards. While plaintiffs point to the opinion in *Friends II*, the D.C. Circuit held only that a TMDL must include daily *load limits*, and did so in express reliance on the statutory requirement to develop a "total maximum daily load." 446 F.3d at 144 (citing 33 U.S.C. § 1313(d)(1)(C)). By contrast, the CWA's references to water quality

[28] Mr. Sulkin spent a number of years in the Division of Water Pollution Control in Tennessee's Department of Health and Environment.

[29] This question is of critical importance when addressing a sediment/TSS TMDL, as severe storm conditions causing high-flow events often result in excessive sediment run-off, particularly from non-point sources of pollution that—unlike most discrete point-source flows—cannot be mechanically controlled.

standards require only that a TMDL set load levels "necessary to attain and maintain applicable water quality standards," 33 U.S.C. § 1313(d)(1)(C), and does not otherwise refer to any particular timeframe.[30] As a theoretical matter, there is nothing incongruous about establishing daily pollutant load limits to meet water quality criteria expressed as another timeframe—such as a seasonal average—because the two issues involve different acts: the former involves setting a maximum amount of contaminant that may enter a water body on a given day, while the latter specifies the timeframe over which a particular measurement must be met. In light of the CWA's silence on whether applicable criteria must be achieved at all times or may be periodically violated, the Court looks to whether EPA has reasonably resolved the issue. *Chem. Mfrs. Ass'n*, 28 F.3d at 1266 (citing *Chevron U.S.A., Inc. v. NRDC*, 467 U.S. 837, 843 (1984)).

The first stop for evidence of an EPA interpretation—the Agency's regulations—does not shed any light on this issue. Relevant regulations define water quality standards as "[p]rovisions 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," 40 C.F.R. § 130.2(d); *see also id*. § 130.3 (requiring States to create water quality standards "by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses"), and contain no mention of timeframe. And while plaintiffs point to a provision requiring TMDLs to "take into account critical conditions for stream flow, loading, and water quality parameters," *id*. § 130.7(c)(1), the requirement to account for "critical conditions" is not equivalent to a mandate to set load limits so low as to satisfy applicable water quality standards even in the most extreme weather conditions. Such a reading, moreover, would be entirely inconsistent with another instruction in that same provision requiring a State or EPA to account for "seasonal variations,"

[30] Nor do the CWA provisions defining water quality standards include any periodic reference. *See* 33 U.S.C. § 1313(c)(2)(A) (stating that 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").

id., as the need to account for such seasonal effects would be obviated entirely if the State or EPA has already calibrated load limits to protect water quality standards during the worst-possible flow conditions.

Turning elsewhere, the Agency appears to have resolved this issue through published memoranda. In its 2006 Guidance, EPA explained that when evaluating whether a particular water quality standard is satisfied, a State should rely upon the language of the underlying standard. 2006 Guidance at 39–40. For example, if a water quality criterion requires that a particular pollutant should not exceed a specified level more than ten percent of the time, a TMDL that sets load limits that effectively prevent pollutant levels from exceeding the stated maximum in more than 10% of measurements is sufficient. *Id*. at 39. Along these same lines, where the criterion in question is expressed through a particular timeframe—such as daily or seasonal averages—then the TMDL must set load levels that ensure daily or seasonal compliance. *Id*. at 40. Plaintiffs' alternative interpretation—which would demand that a TMDL meet a criterion expressed as a monthly average under State law *every single day*—not only unreasonably transforms a monthly average into a daily maximum, but also erodes the discretion explicitly granted to the States by the CWA to determine whether their water quality standards should be expressed as daily, weekly, monthly, seasonal, or annual maximums or averages. By contrast, tying the TMDL's requirements to the period set forth in a State's water quality standard is consistent with the CWA, its implementing regulations, and common sense. The Court will therefore defer to EPA's interpretation of the CWA's instruction to develop TMDLs to implement "applicable water quality standards," 33 U.S.C. § 1313(d)(1)(C), as requiring daily pollutant loads that will meet water quality standards in whatever timeframe applies to those standards under state law. *See Bluewater Network*, 370 F.3d at 11 ("[W]here the statute is

ambiguous and the Agency has acted within its delegated authority, we will defer to the Agency's interpretation if it is reasonable.") (quotations omitted).

In this case, the most stringent water quality criteria considered by EPA is the District's .8 meter Secchi depth criterion. DR at 23. And under applicable DC law, that criterion must be met on a "seasonal segment average." D.C. MUN. REGS. tit. 21 § 1104.8. In reliance on this "seasonal" criterion, the District and Maryland observed—in their responses to the objections to the draft TMDL—that "the range of daily loads must *generally* meet standards from day to day, because they must, over the course of a given growing season and year, *also* meet the seasonal and annual loading caps determined to protect water clarity in the long term." DC/MD Cmt. Response at 17. And in response to these same objections, EPA proffers the following:

> The daily loads, when considered as an average over the growing season, are shown to meet the District's seasonal water clarity criterion. Because of the variability of storm loads, some daily loads during the dry weather conditions may be close to, if not, zero, while at other times, during extreme wet weather, the loadings will be quite high. On a daily basis these variable loads might exceed loadings necessary to achieve a certain Secchi depth measurement for that day. However, the applicable criterion is not applied on a daily basis but rather on a seasonal basis. Therefore, the potential periodic daily high excursions of the water clarity criteria are not relevant to determining whether the TMDL's allocations are set at a level necessary to implement the applicable water quality standards expressed as a seasonal average.

DR at 5; *see also id*. at 23–24 ("[C]ompliance with applicable water quality criterion is not evaluated on a daily basis but rather on a seasonal basis. Therefore, the potential for infrequent, periodic high daily sediment loadings does not mean that these TMDLs have not been set a level necessary to attain and maintain the applicable water quality criteria expressed as a seasonal average."). To conclude that the Final TMDL will attain .8 meters Secchi depth on a seasonal basis, EPA relies on historical measurements of water flow in the Anacostia over a three-year period from 1995 to 1997—which included a dry year, a wet year, and an average year—to

model predicted sediment and TSS levels under the proposed load limits. *Id*. at 32–34. This process of modeling water and contaminant flows, which is an established method for predicting effective loads, *Chem. Mfrs. Ass'n*, 28 F.3d at 1264, ensures that "the proposed TMDLs meet the requirement[s] to consider the critical environmental conditions" and "seasonal environmental variations." DR at 32. Because the Agency's reasonable interpretation of the CWA requires attainment of .8 meters Secchi depth as a seasonal average—consistent with DC law—and because the modeling process adopted by the Final TMDL and approved after EPA's extensive review establishes that the maximum loads set for sediments and TSS will result in Secchi depths greater than .8 meters on a seasonable basis, EPA concludes that the Final TMDL properly establishes load limits at "levels necessary to attain and maintain the" seasonal Secchi depth criteria. 40 C.F.R. § 130.7(c)(1). The Court finds no basis in the record to doubt this conclusion, and therefore rejects plaintiffs' challenge.[31]

c. EPA Properly Relied on the Secchi Depth Criterion in Approving the Final TMDL for Aquatic Life

Plaintiffs' final objection concerning EPA's approval of load levels in the Final TMDL is the Agency's exclusive reliance on Secchi depth criteria. Under both DC and Maryland law, water quality criteria tied to the protection of aquatic life are expressed not only in Secchi depth, but also in Nephelometer Turbidity Units, or NTUs. MD. CODE REGS. 26.08.02.08(A)(5)(b) & (C)(5); D.C. MUN. REGS. tit. 21 § 1104.8. NTUs are metrics produced by an instrument called a nephelometer, which has a light beam and detector attached. Because increased sediment and TSS pollution decreases the amount of light able to travel through water, the nephelometer

[31] The Court pauses to emphasize its earlier holding that EPA improperly fails to consider all relevant water quality criteria when approving the Final TMDL. Thus, while it would be proper to rely on the *seasonal* Secchi depth measure if that was the only applicable criteria, to the extent relevant water quality criteria related to recreational and aesthetic uses incorporate a different timeframe, this holding does not shield the Agency from having to evaluate those alternative periods when revising the sediment/TSS TMDL for the Anacostia. For example, Maryland's numeric water quality criterion for recreational uses is expressed both as a monthly average and as a criterion that may not be exceeded "at any time." MD. CODE REGS. 26.08.02.08(A)(5)(b) & (B)(1).

measures the amount of light transmitted by the beam that reaches the detector and translates that measure into the level of sediment contamination, expressed as NTUs: the higher the NTUs, the greater the sediment and TSS pollution in the water. Plaintiffs object that because both the District and Maryland express water quality in NTUs as well as Secchi depth, EPA must evaluate the ability of the Final TMDL to achieve both types of criteria.

In response to this criticism, which was raised in plaintiffs' comments to the draft TMDL, the District and Maryland put forth the results of an EPA study from 1995 to 2002 on the relationship between Secchi depth and NTUs. DC/MD Cmt. Response at 17. The study plots the level of measured NTUs in the water against the measured Secchi depth, and the resulting graph shows that where Secchi depth was at least .8 meters—the criterion relied upon in the Final TMDL—the level of sediment and TSS in that water was never measured above 20 NTUs. *Id.*[32] Relying on this study, the Final TMDL notes that NTUs are "the inverse of Secchi depth," and thus concludes that achieving a Secchi depth of .8 meters will effectively satisfy the most stringent NTU criterion of 20. Final TMDL at 14. EPA in turn determines that the District's and Maryland's reliance on the Agency's prior study of the correlation between Secchi depth and NTUs is reasonable and finds that "turbidity will remain under 20 NTU on a long-term basis if the Secchi depth remains at or above the criteria of .8 meters." DR at 4.

EPA's choice to focus solely on Secchi depth criteria is a permissible exercise of the Agency's discretion under the CWA. The D.C. Circuit has made clear that the use of a surrogate criterion is permissible where "it is reasonable to do so," *Sierra Club v. EPA*, 353 F.3d 976, 982 (D.C. Cir. 2004), and in *Chem. Mfrs. Ass'n*, the Circuit Court explained that EPA's reliance on either a model to predict pollutant measures or a substitute criterion is "arbitrary and capricious" only where no "rational relationship" exists between the two criteria or between a model and a

[32] At no point do plaintiffs question the accuracy of this study.

criterion. 28 F.3d at 1265. In this case, the prior study establishes a relationship between Secchi depth and NTUs, and thus the Court concludes that EPA's reliance on Secchi depth is an appropriate exercise of the Agency's discretion. *Id*. at 1265 (holding that where, as here, EPA demonstrates a "rational relationship" between two criteria, courts "defer[] to the determination of fit" rendered by Agency).

B. Waste Load Allocations for Municipal Sewer Systems

Moving beyond questions concerning the viability of pollutant load limits in the Final TMDL, the Court next turns to the manner in which the total maximum daily discharge is allocated among the various sources of pollution throughout the watershed. 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 setting wasteload allocations, or WLAs, to allocate daily caps among each point source of pollution. In this case, plaintiffs assert that the Final TMDL violates WLA-related requirements because, when dealing with municipal sewer systems, or MS4s, the Final TMDL improperly allocates a single WLA to an entire system rather than to each individual pipe or discharge source within that MS4, Ps' Mtn. at 17–20—despite the categorization of MS4s as point sources under EPA regulations. Final TMDL at 11. The proper treatment of MS4s is crucial, as the vast majority of the Anacostia runs through highly-urbanized areas and drainage from MS4s is responsible for a significant proportion of sediment and TSS pollution introduced into the watershed. DR at 10. According to EPA's Decision Rationale, the Final TMDL's WLAs are broken down by individual point sources where possible—such as for industrial sources of pollution and water treatment facilities—and the remaining WLAs "are broken down by MS4 jurisdiction," rather than by discrete discharge locations (point sources) within that system. *Id*. at

26–31. Despite the absence of full point source disaggregation, the Court concludes, for the following reasons, that EPA's approval of the Final TMDL's allocation scheme is a reasonable exercise of its discretion under the CWA.

First, the CWA itself does not mandate that a TMDL include individual WLAs; rather, the WLA requirement is a creature of EPA regulation. And while the Agency's regulations instruct that a WLA should be assigned to "one of [the water body's] existing or future point sources of pollution," 40 C.F.R. § 130.2(h), such that the total TMDL is made up of, among other things, the aggregate of all "individual WLAs for point sources," *id*. § 130.2(i), the Agency has never interpreted these regulatory statements to require development of WLAs that are broken down and allocated to each individual discharge point throughout an entire MS4. An agency's interpretation of its own regulations is entitled to substantial deference, *Auer v. Robbins*, 519 U.S. 452, 461 (1997), particularly where—as here—those regulations impose requirements beyond those found in the governing statute.[33]

Second, with respect to WLAs for MS4 jurisdictions, EPA's interpretation permitting system-wide WLAs is consistent with, and in furtherance of, the goals implicit in the Agency's regulations concerning point sources. Total pollutant loads 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

[33] In response, plaintiffs cite *Central Laborers* for the proposition that EPA's chosen practice is invalid if the Agency's methods violate its own regulations. 541 U.S. at 748. In that case, however, the agency in question had "told two stories"—one in which certain acts were "flatly prohibit[ed]" by regulations and one in which those same acts were "routinely approved" under agency practices. *Id*. at 747–48. As set forth *infra*, however, in this instance EPA's practice is not contradictory to—but rather consistent with—its formal regulations.

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 the 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.

The use of MS4 WLAs is consistent with EPA's motivation for requiring WLAs because, unlike other individual point sources in a particular area, a MS4 is regulated by a single entity that receives a single NPDES permit. 33 U.S.C. § 1342(p)(3)(B)(i); *see also id*. § 1342(q). And even though a MS4 contains multiple outflows that can contribute contaminants to the water body, a single entity is responsible for monitoring and controlling all such discharges. Thus, through the permitting process EPA can effectively impose on each MS4 permit-recipient the burden of sub-allocating discharges throughout the MS4 to individual point sources, lest the entire system be found in violation of its NPDES permit. And EPA's choice to allocate WLAs in such a manner is consistent with one of the foundational principles of the CWA, which is that the burdens of cleaning up the Nation's waters is one to be shared among federal, state, and local authorities. *Friends I*, 346 F. Supp. 2d at 203.

Plaintiffs protest, however, that setting WLAs on a jurisdiction-wide basis will make it nearly impossible to monitor for compliance with NPDES permits and the Final TMDL. Ps' Mtn. at 19–20. According to plaintiffs' expert, without well-defined WLAs for each individual point source in a MS4, it will be "hard or impossible to do actual real-time monitoring." Sulkin Memo at 4–5. As an initial matter, the Court does not see why this is so. If a single entity

controls all of the outflows in a particular MS4 jurisdiction—as is the case here—that entity is surely capable of monitoring sediment and TSS discharges from each point source and then aggregating those outputs to ensure that total outflows remain below the system-wide maximum set forth in the WLA and subsequent NPDES permit. And to the extent plaintiffs rely on a hypothetical collective action problem, this concern is effectively nullified by the fact that the MS4s are overseen by individual entities. In a scenario where five different polluters are subject to a single WLA, each polluter might have little incentive to limit its own outflows because—as long as the outflows from its single point source does not exceed the full WLA—it could not be found in violation of the TMDL. Where every point source in a MS4 is controlled by a single entity, however, there is a single permit-holder that is accountable across the jurisdiction. Thus if WASA were to allow each point source in its MS4 to discharge the full WLA, it could not blame another point source within that jurisdiction for the violation, as WASA also controls that point source.

Finally, in recognition of EPA's adopted approach to MS4s, Congress amended the CWA to authorize the issuance of NPDES permits for MS4s "on a system- or jurisdiction-wide basis," 33 U.S.C. § 1342(p)(3)(B)(i), and to require NPDES permits that conform to the strictures of the Combined Sewer Overflow Control Policy, which was promulgated by EPA in 1994 and also provides for system-wide MS4 permits. *Id.* § 1342(q)(1). In light of these amendments, EPA published guidance explaining "that the available data and information usually are not detailed enough to determine waste load allocations for NPDES-regulated storm water discharges on an outfall-specific basis." EPA, Memorandum: Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on those WLSs 1 (2002), *available at* http://water.epa.gov/lawsregs/lawsguidance/cwa/

tmdl/upload/final-wwtmdl.pdf. In light of such informational deficiencies, the Agency instructs that "it may be reasonable to express allocations for NPDES-regulated storm water discharges from multiple point sources as a single categorical wasteload allocation." *Id*.

Consistent with EPA's guidance, the District and Maryland previously explained, with respect to sediment and TSS pollution throughout the Anacostia, that

> [t]here is insufficient monitoring data available to break down the allocations by sub-basin. It will require additional time and financial resources to collect such information, which perhaps may not be cost-effective for refining implementation plans. As more data are collected in the future, TMDL implementation plans can be developed to effectively target various specific sources with appropriate sediment reduction goals.

DC/MD Cmt. Response at 3. In reliance on this lack of sufficient information, the District and Maryland developed system-wide WLAs for MS4s that "follow[] EPA guidance," noting that the countervailing "proposition that assigning allocations to many hundreds, possibly thousands, of MS4 outfalls would be an effective means of achieving the goals of a TMDL is extremely questionable." *Id*. at 19–20. The Court finds no fault with this practical decision, and—in conjunction with Congress' amendments to the CWA, subsequent EPA guidance, and the practical and scientific limitations present—holds that EPA properly exercised its discretion in approving system-wide WLAs for MS4s in the Final TMDL. In this matter, the Court concurs with Judge Urbina: "Because EPA's allocation of wasteloads to categories of sources does not deviate from the purpose of the regulation and is implicitly countenanced by other sections of the CWA, EPA has not acted improperly." *Friends I*, 346 F. Supp. 2d at 203; *see also, e.g.*, *Dioxin/ Ogranochlorine Ctr. V. Rasmussen*, No. C93-33D, 1993 U.S. Dist. LEXIS 15595, at *12–14 (D.D.C. Aug. 10, 1993) (finding that allocation to group of point sources was rational because "EPA lacked scientific data to set waste load allocations for other point sources due to the scientific limits on detecting and measuring dioxin").

C. Margin of Safety in the Final TMDL

Plaintiffs' last challenge to EPA's approval of the Final TMDL turns on the adequacy of the margin of safety incorporated into the relevant models to calculate maximum load levels for sediment and TSS pollution. Under the CWA, any TMDL must provide "a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality." 33 U.S.C. § 1313(d)(1)(C). In this instance, the margin of safety in the Final TMDL "is implicit and not specific as a separate term," Final TMDL at 37, and is constructed using "several implicit conservative assumptions used in the modeling framework." *Id*. at 38. According to the Final TMDL, these assumptions include underestimating predicted Secchi depths, not incorporating the process of "sediment aging"—the inclusion of which "would have led to greater improvements in water clarity" as predicted by the model—discounting the effects of SAV growth in trapping suspended material and thus reducing the sediments and TSS in the water body, and using maximum—rather than average—discharges from municipal and industrial point sources when simulating water conditions. *Id*. at 38. Each of these assumptions is designed to cause the Final TMDL's models to over-predict the presence of sediments and TSS in the Anacostia. Thus, the load limits—which are developed to reduce pollution from *predicted* levels to amounts necessary to satisfy water quality standards—call for total reductions that are far greater than necessary to move from *actual* conditions to safe levels. *Id*. Plaintiffs, however, object that "reliance solely on an 'implicit' margin of safety that is neither measurable nor verifiable and provides no rational basis for determining that the statutory test for a margin of safety has been met." Ps' Mtn. at 20–21.

EPA's review of the assumptions incorporated into the Final TMDL was undertaken in light of its own "guidance suggest[ing] two approaches to satisfy the [margin of safety]

requirement," one of which is to use "conservative modeling assumptions to develop the TMDL and its allocations" DR at 32, and the Agency expresses "confidence in the calibrated/validated modeling foundation serving as the basis for the TMDL calculations." *Id*. And in reviewing the particular assumptions, EPA concludes that the use of the years 1995–97 incorporates then-existing conditions along the Anacostia, which are worse than today's conditions, and thus underestimates Secchi depths that will result from implementation of the Final TMDL. *Id*. The Agency also finds that the model's exclusion of the effects of sediment aging and SAV growth on total sediments and TSS in the water causes "the model [to] under-predict[] water clarity" resulting from the proposed maximum loads. *Id*. at 32–33. Finally, EPA concurs that using point sources' maximum outputs in the model—rather than their average outputs—also overestimates the total amount of sediment and TSS pollution actually in the Anacostia, leading to modeled results that are poorer than in reality. *Id*. at 33. Based on this review, EPA concludes that "the proposed TMDLs meet the requirement to include a margin of safety." *Id*.

The Court finds no fault with EPA's decision to approve an implicit margin of safety developed through conservative modeling assumptions. The CWA mandates only the *existence* of a margin of safety—it does not dictate any particular manner in which that margin is to be incorporated into the TMDL, nor does it require a margin of safety that is "quantifiable," as plaintiffs insist. Plaintiffs cannot point to any statutory or regulatory provision prohibiting reliance on an implicit margin of safety. In light of the dearth of specific guidance in either the CWA or its implementing regulations, EPA has promulgated an agency memorandum that explicitly approves of the use of implicit margins of safety. EPA, Protocol for Developing Sediment TMDLs, Oct. 1999, *available at* www.epa.gov/owow/tmdl/sediment/pdf/sediment.pdf. Absent contrary statutory requirements, the Court will defer to the Agency's determinations

concerning methods for incorporating appropriate margins of safety into a TMDL. *See Friends I*, 346 F. Supp. 2d at 199 ("[C]ourts defer to an agency's choice of approach for deriving a margin of safety as a matter of administrative policy and scientific uncertainty.").

Nor does the absence of specific, quantifiable data with respect to the margin of safety in the Final TMDL raise any alarms. As the Second Circuit has observed in similar circumstances, "simply to reject EPA's efforts to implement the CWA because it must respond to real water quality problems without the guidance of a rigorously precise methodology would essentially nullify the exercise of agency discretion." *Muszynski*, 268 F.3d at 102. Reviewing each of the four conservative assumptions incorporated into the Final TMDL's modeling process, EPA cogently explains how every single one leads to better-than-predicted results in final sediment and TSS pollution in the Anacostia.[34] This is sufficient to satisfy the requirements of both the CWA and its implementing regulations. *See id*. at 99 (approving TMDL that implements margin of safety through adoption of conservative assumptions in modeling process).

V. CONCLUSION

The Court is not enamored with the prospect of causing further delay in the implementation of a sediment/TSS TMDL that is already more than thirty years late to the party.

[34] Plaintiffs raise two specific objections to these assumptions. First, plaintiffs argue that that the use of daily and weekly maximums in the models—as compared to monthly maximums set by the WLAs—does not create an "obvious" margin of safety. But the answer to this apparent mystery is simple. To account for daily flow variations, a daily maximum is greater than the 7-day average of a weekly maximum, and a weekly maximum is greater than the 4½-week average of the monthly maximum. For example, a point source might allocate 5 units of pollution per day, but only 25 per week (rather than 35 based on the daily maximum), and only 100 per month (rather than 150 based on the daily maximum.) If the model uses the 5 units-per-day maximum, it would predict annual pollution of 5*365 = 1825 units per year. Thus, the model calls for load limits necessary to move from 1825 units in annual pollution to a level required to meet applicable water quality standards. The WLAs, however, would only permit 100*12 = 1200 units per year in actual pollution. Thus, the *true* conditions of the water would be far better than the *modeled* conditions, and the resulting reduction—calculated from *predicted* conditions—would call for a far greater decline in pollution than is necessary to meet water quality standards given *actual* conditions.

Second, plaintiffs point to an analysis they submitted during the comment period for the draft TMDL that calls into question some of the conclusions of EPA's prior analysis concerning the correlation between Secchi depth and TSS levels. EPA, however, chose to rely on its own prior research, and the Court will not second-guess the Agency's scientific conclusion on this point.

At the same time, the Court is not eager to take lightly its constitutional and statutory obligations to review the actions of EPA, as well as the District and Maryland, particularly when these parties' deliberate indifference was largely responsible for the extensive hold-up. The CWA was enacted in light of severe threats to the Nation's navigable waters, and it was intended to spur immediate action by both federal and state authorities. Yes despite the Act's *command* that States identify and develop TMDLs for implemented waters, the District and EPA spent 20 years *ignoring* these obligations and fighting attempts to compel them to act. Then, despite the Act's unmistakable requirement to develop a total maximum *daily* load for each pollutant, EPA and the District spent the next 7 years insisting that they need only develop *annual* loads. And now, despite the Act's clear instruction that each TMDL set levels necessary to implement *all* applicable water quality standards, EPA and the District—now joined by Maryland—have spent the last 4 years arguing that they need only pay attention to *some* of those standards. The Court will not countenance such conduct, and therefore grants plaintiffs' motion for summary judgment based on its conclusion that EPA acted arbitrarily and capriciously, in violation of the APA and the CWA, by approving a sediment/TSS TMDL that ignored the effects of sediment and TSS pollution on recreational and aesthetic uses of the Anacostia River.

A separate Order and Judgment shall issue this date.

Signed by Royce C. Lamberth, Chief Judge, on July 25, 2011.

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

ANACOSTIA RIVERKEEPER, INC., *et al.*,	)	
Plaintiffs,	)	
v.	)	09-cv-97 (RCL)
LISA JACKSON, Administrator, United States Environmental Protection Agency, *et al.*,	)	
Defendants.	)	

ORDER AND JUDGMENT

In its Memorandum Opinion, the Court holds that when developing a total maximum daily load ("TMDL") under the Clean Water Act, a State—in designing the TMDL—and the Environmental Protection Agency ("EPA" or "the Agency")—in reviewing the TMDL—must determine whether the pollutant levels set by that TMDL are sufficient to implement all water quality standards applicable to the water body under state law. This standard in mind, the Court

DECLARES that defendant EPA's approval of the Total Maximum Daily Loads for Sediment/Total Suspended Solids for Anacostia River, July 24, 2007 ("Final TMDL"), is arbitrary and capricious because the Agency failed to provide a reasoned, lawful basis for concluding that the Final TMDL will implement all applicable water quality standards under DC and Maryland law. Accordingly, it is hereby

ORDERED that plaintiff's Motion for Summary Judgment, July 17, 2009 [21] is GRANTED IN PART with respect to claims concerning EPA's conclusion that the Final TMDL will implement all applicable water quality standards and DENIED in all other respects. With respect to all other objections to EPA's approval of the Final TMDL, the Court

DECLARES that

1. EPA reasonably concluded that periodic violations of water quality standards under the Final TMDL are consistent with state law and therefore permissible under the law;

2. EPA properly relied on the Secchi depth criterion in approving the Final TMDL for protection of aquatic life only;

3. EPA's interpretation of the Clean Water Act permitting wasteload allocations on a system-wide basis for municipal separate storm sewer systems is reasonable; and

4. EPA's approval of the implicit margin of safety in the Final TMDL is consistent with the Clean Water Act and based on sufficient evidence; accordingly, it is hereby

ORDERED that defendant's Cross-Motion for Summary Judgment, Sep. 18, 2009 [26] is GRANTED IN PART with respect to claims concerning the above four declarations and DENIED in all other respects; it is furthermore

ORDERED that intervenor-defendants' Motion for Summary Judgment, Sep. 18, 2009 [28] and Cross-Motion for Summary Judgment, Sep. 18, 2009 [29] are GRANTED IN PART with respect to claims for which EPA's Cross-Motion is granted and DENIED in all other respects. In light of the Court's conclusion that EPA acted arbitrarily and capriciously in violation of the Administrative Procedure Act when approving the Final TMDL, it is hereby

ORDERED that JUDGMENT is entered

1. on behalf of plaintiffs with respect to claims concerning EPA's failure to provide a lawful, reasoned basis for concluding that the Final TMDL will implement all applicable water quality standards under DC and Maryland law; and

2. on behalf of EPA with respect to all other claims concerning EPA's approval of the Final TMDL; it is furthermore

ORDERED that EPA's approval of the Final TMDL is vacated; it is furthermore

ORDERED that vacateur is stayed for one (1) year from this date, by which time EPA must adopt or approve a sediment/TSS TMDL for the Anacostia River that complies with today's Memorandum Opinion and applicable statutory and regulatory requirements.

SO ORDERED.

Signed by Royce C. Lamberth, Chief Judge, on July 25, 2011.