

NOT YET SCHEDULED FOR ORAL ARGUMENT

No. 05-5015

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

FRIENDS OF THE EARTH,

Plaintiff-Appellant,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, ET AL.,

Defendant-Appellees,

and

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY,

Intervenor-Defendant-Appellee.

ON APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

INITIAL BRIEF FOR THE FEDERAL APPELLEES

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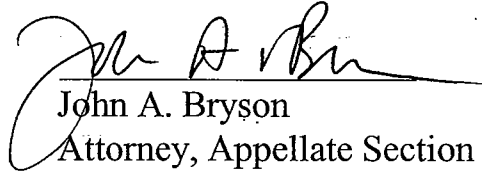
CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

A. Parties and amici. – All parties and amici appearing before this Court are listed in Appellant’s Opening Brief.

B. Rulings under review. – All references to the matters at issue appear in Appellant’s Opening Brief.

C. Related Cases. – Aside from the cases set out in Appellant’s Opening Brief, Federal appellees are not aware of any related cases within the meaning of Cir. Rule 28(a)(1)(C).

Respectfully submitted,



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GLOSSARY

APA	Administrative Procedure Act
BOD	Biochemical Oxygen Demand
CSO	Combined Sewer Overflow
CWA	Clean Water Act
District	District of Columbia
DO	Dissolved Oxygen
EPA	United States Environmental Protection Agency
JA	Joint Appendix
NPDES	National Pollution Discharge Elimination System
SAV	Submerged Aquatic Vegetation
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids

JURISDICTIONAL STATEMENT

A. Jurisdiction of the district court. – The district court had jurisdiction under 28 U.S.C. § 1331.

B. Jurisdiction of the court of appeals. – This Court has jurisdiction over the appeal pursuant to 28 U.S.C. § 1291. The district court’s judgment granting defendants’ motion for summary judgment was entered on November 29, 2004 (11/29/04 Order & Docket Sheet; JA). Plaintiff’s notice of appeal was filed on December 30, 2004, within the time allowed by Rule 4(a)(1)(B) (Notice of Appeal; JA).

QUESTIONS PRESENTED

1. Whether the Environmental Protection Agency and the states may, under Section 303 of the Clean Water Act, express the required determination of maximum pollution loads for impaired waterbodies on an annual, seasonal, daily, or other appropriate basis.

2. Whether the Environmental Protection Agency reasonably determined that the load established and submitted by the District of Columbia for biochemical oxygen demand and the load determination established by EPA for total suspended solids would each implement the applicable District of Columbia

water quality standards for the portion of the Anacostia River that flows through the District of Columbia.

STATUTES AND REGULATIONS

The applicable statutes and regulations are found in the Addendum to Appellant's Brief.

STATEMENT OF THE CASE

A. Nature of the case and proceedings below. – Plaintiff Friends of the Earth filed its complaint in the district court on January 21, 2004 (Complaint; JA).^{1/} Friends of the Earth asserted two claims under the Administrative Procedure Act, 5 U.S.C. § 706, against the United States Environmental Protection Agency (“EPA”) (Complaint 1, 13-18; JA). Count 1 alleged that EPA’s approval of a total maximum daily load (“TMDL”) under Section 303(d) of the Clean Water Act, 33 U.S.C. § 1313(d), submitted by the District of Columbia for biochemical oxygen demand for the portion of the Anacostia River that flows through the District of Columbia was arbitrary, capricious, an abuse of discretion and not in accordance with law (Complaint 13-15; JA). Count 2 alleged that EPA’s establishment of a TMDL for total suspended solids for the portion of the

^{1/} Friends of the Earth originally brought its claims directly to this Court on a petition for review, but this Court dismissed the petition for lack of jurisdiction. Friends of the Earth v. USEPA, 333 F.3d 184 (D.C. Cir. 2003).

Anacostia River that flows through the District of Columbia was arbitrary, capricious, an abuse of discretion and not in accordance with law (Complaint 16-17; JA). EPA answered (Answer; JA), and the District of Columbia Water and Sewer Authority (“WASA”), a regional authority that provides drinking water and wastewater collection and treatment in the metropolitan Washington, D.C. area, was permitted to intervene as a defendant and also answered (Answer of WASA; JA).

The parties then filed cross-motions for summary judgment (Docket Sheet; JA). On November 29, 2004, the district court issued a memorandum opinion and an order granting EPA’s motion for summary judgment and denying Friends of the Earth’s motion (11/29/04 Memorandum Opinion; 11/29/04 Order; JA).

B. Statutory and regulatory background. – The Clean Water Act (“CWA”), 33 U.S.C. §§ 1251 et seq., was adopted "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). As the cornerstone of the 1972 amendments to the Act, Congress prohibited the discharge of any pollutant from a point source into waters of the United States unless that discharge complies with the Act's specific requirements. 33 U.S.C. §§ 1311(a), 1362(12). Compliance may be achieved by obtaining and adhering to the terms of a National Pollutant Discharge Elimination System ("NPDES") permit

issued pursuant to 33 U.S.C. § 1342. EPA administers the NPDES permit program in the District of Columbia.

All NPDES permits must contain: (1) technology-based effluent limitations that reflect the pollution reduction achievable based on particular equipment or process changes, without reference to the effect on the receiving water; and (2) where necessary, more stringent limitations (known as “water quality-based effluent limitations”) representing that level of control necessary to ensure that the receiving waters achieve applicable water quality standards.

33 U.S.C. § 1311(b).

Section 303 of the CWA requires each State to adopt water quality standards applicable to its intrastate and interstate waters. See 33 U.S.C. § 1313(a)-(c). Water quality standards under the Act consist of three principal elements: (1) a designated "use" of the water, such as for public water supply, recreation, or propagation of fish. See 40 C.F.R. § 130.3(f); (2) "criteria" specifying the amounts of various pollutants that may be present in those waters without impairing the designated uses, expressed in numerical concentration values or narrative form; see 40 C.F.R. § 131.3(b); and (3) an antidegradation policy. See 33 U.S.C. § 1313(c)(2)(A); 40 C.F.R. §§ 131.6, 131.10, 131.11, 131.12. EPA retains the responsibility to review standards adopted by the States

to ensure their consistency with the requirements of the Act. 33 U.S.C.

§ 1313(c)(3)-(4).

In part to facilitate achievement of water quality-based effluent limitations in those situations where technology-based effluent limitations or other required controls are not sufficient to bring polluted waterbodies into attainment with applicable water quality standards, Congress also required States to establish “total maximum daily loads” or “TMDLs.” Section 303(d) and EPA’s implementing regulations create a systematic means for States to identify and list waters within their boundaries for which the technology-based effluent limitations and other required controls are not stringent enough to implement the applicable water quality standards. See 33 U.S.C. § 1313(d)(1)(A); 40 C.F.R. § 130.7(b)(1). States must establish a priority ranking for such waters, and then, in accordance with that priority ranking, develop for each waterbody a TMDL for each pollutant of concern at a level necessary to implement the applicable water quality standards. 33 U.S.C. § 1313(d)(1)(A), (C). The TMDL must also incorporate an adequate margin of safety. 33 U.S.C. §§ 1313(d)(1)(C).

States are required to submit lists of water quality limited segments and TMDLs to EPA for review. 33 U.S.C. § 1313(d)(2). If EPA disapproves a State’s list or TMDL, it must itself establish the list or TMDL for such waters as

necessary to implement the applicable water quality standards. 33 U.S.C.

§ 1313(d)(2).

A TMDL represents the maximum amount of pollutant "loadings" that a water can receive without exceeding water quality standards, taking into account seasonal variations and a margin of safety. 33 U.S.C. § 1313(d)(1)(C). The term "total maximum daily load" is not expressly defined in the Clean Water Act. EPA's regulations define a TMDL for a pollutant as the sum of (1) the "wasteload allocations" allocated to point sources;^{2/} (2) the "load allocations" allocated to nonpoint sources or natural background; and (3) a margin of safety. 40 C.F.R. § 130.2(g)-(i).

TMDLs are not self-executing. Like water quality standards, wasteload allocations for point sources are implemented through NPDES permits issued pursuant to 33 U.S.C. § 1342. See 40 C.F.R. § 122.44(d)(1)(vii)(B) (permit limitations must be consistent with the assumptions of any applicable wasteload allocations).^{3/} In contrast, load allocations for nonpoint sources are implemented

^{2/} A "point source" is "any discernible, confined and discrete conveyance . . . from which pollutants are or may be discharged." 33 U.S.C. § 1362(14). "Nonpoint sources" are sources of pollution that are not "point sources," such as runoff from agricultural activities.

^{3/} Permits must include effluent limitations necessary to protect water quality
(continued...)

through voluntary and/or cooperative approaches, and in some cases as required by State or local law. See Pronsolino v. Nastro, 291 F.3d 1123, 1126-27 (9th Cir. 2002) (CWA provides no direct mechanism to control nonpoint source pollution but uses federal grants to the states to accomplish this task), cert. denied, 539 U.S. 926 (2003); Natural Resources Defense Council v. EPA, 915 F.2d 1314, 1316 (9th Cir. 1990) (noting that Clean Water Act does not directly prohibit releases of pollutants from nonpoint sources).

C. Development and establishment of the TMDLs for biochemical oxygen demand and total suspended solids for the Anacostia River. – The Anacostia River rises in Maryland and flows through the District of Columbia to the point where it joins the Potomac River (BOD Decision Rational (BOD-1 at 7); JA). The tidal portion of the Anacostia reaches into Maryland at the confluence of the Northeast Branch and the Northwest Branch at Bladensburg, Maryland (ibid. ; JA). The watershed covers 176 square miles in the District of Columbia and Maryland and is highly urbanized; only 25% of the area is forested and only 3% constitutes wetlands (ibid. ; JA). Pollution from storm water runoff and from other point and nonpoint sources has contributed to water quality problems for the Anacostia

^{3/}(...continued)

standards even in the absence of TMDLs. 33 U.S.C. § 1311(b)(1)(C). A TMDL is simply one tool that permit writers use to establish such limitations.

((BOD Decision Rational (BOD-1 at 8); JA). For purposes of establishing water quality standards, the District has designated the following uses for the Anacostia:

Class A	Primary contact recreation
Class B	Secondary contact recreation and aesthetic enjoyment
Class C	Protection & propagation of fish, shellfish, and wildlife
Class D	Protection of human health related to consumption of fish and shellfish
Class E	Navigation

((BOD Decision Rational (BOD-1 at 19); JA). The District has listed the portion of the Anacostia that flows through the District as impaired under Section 303(d) of the CWA because of, inter alia, violations of two of the District's water quality standards, the standard governing the level of dissolved oxygen and the standard governing turbidity (muddy or cloudy conditions) (BOD TMDL Report (BOD-1), at 1; TSS TMDL Report (TSS-1), at 2-3; JA). The two TMDLs at issue here were established to address these impairments.^{4/}

1. Development of the biochemical oxygen demand TMDL to meet the dissolved oxygen water quality standard. – Healthy waters contain dissolved oxygen upon which organisms rely. The District's water quality standard seeks to protect the water quality by requiring a minimum level of dissolved oxygen. The

^{4/} The establishment of these TMDLs was required pursuant to a consent decree settling the claims in Kingman Park Civic Association v. EPA, 84 F. Supp.2d 1 (D.D.C. 1999).

dissolved oxygen criterion is expressed as both a daily average and a one-hour minimum (BOD Decision Rationale (BOD-1), at 20; District of Columbia Register, January 21, 2000 (BOD-60), at 291; JA). In each case, the level is 5 mg/l, except that the one-hour minimum allows a less stringent level of 4 mg/l from July through February (BOD Decision Rationale (BOD-1), at 20; BOD TMDL Report (BOD-1), at 2; District of Columbia Register, January 21, 2000 (BOD-60), at 291; JA).

Certain pollutants “demand” and consume dissolved oxygen. One measure of the rate at which dissolved oxygen is consumed is a parameter called “biochemical oxygen demand” (“BOD”). Oxygen is consumed by certain microorganisms as they decompose organic matter, or by other types of bacteria through respiration when they feed on nutrients. See Maier v. U.S.E.P.A., 114 F.3d 1032, 1035-1036 (D.C. Cir. 1997). The District listed the Anacostia River on the 1998 section 303(d) list because of failures to meet the dissolved oxygen criterion and identified the pollutant of concern as excessive BOD (Fact Sheet Attached to 1998 List Submission (TSS-68), at 2 (also labeled “DISTRICT TMDL 26”); JA).

The primary sources of BOD in the Anacostia watershed are pollutants in (1) overflows from the combined sewer and storm water collection system that discharge into the river, (2) storm water that passes through a storm water

collection system and empties into the river, and (3) storm water runoff (BOD TMDL Report at 4-5; JA). For a portion of the District, WASA maintains a combined sewer system that carries both sanitary sewage and storm water flows that originally were all discharged into the Anacostia (BOD TMDL Report at 2; JA). In the 1930's, the Blue Plains Wastewater Treatment Plant was constructed, and during dry weather, flows through the combined system are directed to Blue Plains for treatment before being discharged into the Potomac River (BOD TMDL Report at 2-3; JA). In wet weather conditions, however, the flow exceeds the capacity of the combined system, resulting in “combined sewer overflows” (“CSO”) through outfalls into the Anacostia (ibid. ; JA). Storm water and sewage collection systems constructed more recently have separate collection and transport systems for sewage, which is taken to Blue Plains, and for storm water, which is collected and discharged directly into the river; the upper two-thirds of the Anacostia’s drainage area is covered by such separated systems (BOD TMDL Report at 4; JA). In addition to WASA’s storm water system, there are several Federal facilities along the river that collect and discharge storm water (BOD TMDL Report at 12; JA). Finally, some storm water runoff is not collected as part of a system, but reaches the river by overland flow (TAM/WASP Model (BOD-48), at 47; JA).

To establish the BOD TMDL, the District used the "Tidal Anacostia Model/Water Quality Simulation Program" (TAM/WASP) to model how various inputs and conditions led to various levels of dissolved oxygen. A water quality model is used to provide an accurate picture of how the discharge of a pollutant impacts water quality over time and factors in the interaction of many variables. For example, the variables addressed in the BOD model include water flow velocity, water depth, transport of pollutants, sediment oxygen demand, sediment buildup and various chemical and biological processes (TAM/WASP Model (BOD-48), at xi, 4-66; JA). To establish the model as a reliable predictor of dissolved oxygen levels under various inputs and conditions, the District calibrated the model using three years of daily data (1988-90) and then verified the accuracy of the model using ten years of daily data (1985-1994) (TAM/WASP Model (BOD-48), at 66; JA).^{5/} From this calibration and verification, the District

^{5/}The data used for this calibration and verification came from over fifteen years of extensive data on the Anacostia River collected by the District of Columbia Department of Health ("DOH") (TAM/WASP Model (BOD-48), at 24; JA). In calibrating the model for the Anacostia River, technical staff used three years of historical water quality data from the Anacostia River to fine tune the model so that it more accurately simulated how discharges affect water quality in the Anacostia River. Then, staff verified the accuracy of the model by running the model for the ten year time period from 1985 to 1994 and comparing the output from the model with the actual historical data from the Anacostia River. A full discussion of this calibration and verification process is provided in TAM/WASP (continued...)

and EPA concluded that the model reasonably simulated how discharges of pollutants affect water quality in the Anacostia River and accurately predicted how a given percentage reduction in pollutant loads would affect dissolved oxygen levels on a daily basis (TAM/WASP Model (BOD-48), at 121-124; JA).

Then, the District ran the model through thirteen scenarios with various percentage reductions in the loads for BOD, nitrogen, and phosphorus to determine whether the dissolved oxygen standard was met each day (BOD TMDL Report (BOD-20), at 7-9, Appendix I; BOD Decision Rationale (BOD-1), at 20; JA).⁵⁷ The District ultimately selected the "Scenario 11" set of load reductions, under which: (1) storm water loads for Maryland and the District were reduced by 50% for BOD and 30% for nutrients, and (2) CSO overflows were reduced by 90% for both BOD and nutrients (BOD TMDL Report (BOD 20), at 8-9; JA). The District concluded that the water quality standard would be met except for three storms (ibid.; JA). To account for these three events, the District allocated an additional loading reduction of 17,224 pounds of BOD from Maryland

⁵⁷(...continued)
Model (BOD-48), at 66-120; JA).

⁵⁸ Like BOD, phosphorous and nitrogen can reduce the amount of dissolved oxygen in the river, and so load reductions for these nutrients were included in the TMDL.

(BOD TMDL Report (BOD 20), at 10-1; JA). The District further reduced the assumed load by providing a margin of safety in the amount of an additional reduction of 1% for each parameter (BOD TMDL Report (BOD 20), at 13; BOD Decision Rationale (BOD-1), at 27; JA). The District concluded, and EPA agreed, that based on the model's simulation of the daily dissolved oxygen levels of each segment on each day over the three year period, these allocations would achieve the daily dissolved oxygen criterion even though the allocations are expressed as an annual average (BOD TMDL Report (BOD 20), at 9-10; BOD Decision Rationale (BOD-1), at 20-21, 26; JA).

The District concluded, and EPA agreed, that expressing the BOD TMDL in terms of annual average loads of BOD, phosphorus and nitrogen, rather than a daily or seasonal load, was a reasonable way of assuring achievement of the water quality standard for dissolved oxygen. The District noted that "there is no continuous permitted point source loads that contribute to the dissolved oxygen problem. The problem is due to a precipitation-induced pollution load. The sequence of multiple storms along with the magnitude and timing of individual storms is more of a determining factor than stream flow" (BOD TMDL Report (BOD-20), at 6-7; JA). Further, a variety of different circumstances at different times of the year contribute to the dissolved oxygen problem, including storms

upstream that bring large loads, storms that increase flow and cause BOD stored in stream bed sediment to become resuspended in the water column, and loads that are deposited in the stream bed during cold months that start to decompose as the water temperatures rise in the spring (BOD TMDL Report (BOD-20), at 9; JA). Thus, the District noted, “[t]here does not appear to be a reason to establish seasonal loads but rather annual loads for wet weather events” (ibid. ; JA). EPA concurred, noting that “[t]he TMDLs are expressed as average annual loads recognizing that for these precipitation driven events, the event mean concentration is the limiting parameter” (BOD Decision Rationale (BOD-1), at 26; JA).

2. Development of the total suspended solids TMDL to meet the turbidity water quality standard. – In contrast to the District’s water quality standard for dissolved oxygen, which is expressed as a numerical limit, the water quality standard for turbidity is a narrative standard. In particular, the standard requires that:

The surface waters of the District shall be free from substances attributable to point or nonpoint sources discharged in amounts that do any one of the following:

1. Settle to form objectionable deposits;
2. Float as debris, scum, oil, or other matter to form nuisances;
3. Produce objectionable odor, color, taste, or turbidity;

4. Cause injury to, are toxic to or produce adverse physiological or behavioral changes in humans, plants, or animals;
5. Produce undesirable or nuisance aquatic life or result in the dominance of nuisance species; or
6. Impair the biological community which naturally occurs in the waters or depends on the waters for their survival and propagation.

(TSS TMDL Report (TSS-1), at 6; JA).

The District identified the Anacostia River as an impaired waterbody because of failure to meet this standard, and named excessive levels of total suspended solids (“TSS”) as the main cause (Fact Sheet Attached to 1998 List Submission (TSS-68), at 2 (page also identified as “DISTRICT TMDL 26”); JA).

Because the turbidity standard is a narrative standard, the first step in development of the TMDL was to develop a numerical interpretation of the standard. Thus, EPA expressed the District’s narrative criterion in the form of a numerical target or “endpoint” for acceptable amounts of TSS (TSS TMDL Report (TSS-1), at 8, 9; JA). To protect aquatic life, the Class C designated use, EPA focused on restoring and maintaining the critical environmental habitat of submerged aquatic vegetation, upon which the biological community depends for food and habitat (TSS TMDL Report (TSS-1), at 6; TSS Response to Comment #1 (TSS-2); JA). Using a study performed for the Chesapeake Bay watershed (which includes the Anacostia River), EPA concluded that a numerical endpoint of “less

than 15 mg/l” of TSS, when combined with reductions in nutrients already established in the BOD TMDL, would protect the aquatic vegetation (TSS TMDL Report (TSS-1), at 8-10; TSS Response to Comment # 20 (TSS-2), at 4; Chesapeake Bay Submerged Aquatic Vegetation Water Quality and Habitat-Based Requirements and Restoration Targets (“Chesapeake SAV Report”) (TSS-55), at iv, 4; JA). EPA therefore established the TSS TMDL specifically to protect fish, shellfish and wildlife by setting TSS loads, for the period from April 1 through October 31, that would assure water clarity sufficient for the growth of the aquatic vegetation (TSS TMDL Report (TSS-1), at 6, 7; JA).

In the TMDL, EPA also recognized that turbid water generally interferes with recreational use and aesthetic enjoyment of water (TSS Decision Rationale (TSS-1), at 6-7; JA). EPA decided, however, that it was not necessary to develop an additional, specially tailored, numerical turbidity endpoint to protect those uses because it had identified an objective numerical endpoint for an objective environmental problem caused by turbidity – the loss of submerged aquatic vegetation – and protection of the recreational uses and aesthetic enjoyment from excessive turbidity, by comparison, is too subjective and not readily amenable to a numeric endpoint (TSS TMDL Report (TSS-1), at 6-7; EPA Water Quality Guidance “Gold Book” Excerpts (TSS-48), at 4; JA). EPA also concluded that

TSS reductions associated with the aquatic life numeric endpoint would also make the water more desirable for recreation, thereby addressing the subjective recreational and aesthetics goals through the achievement of the objective aquatic life target (TSS TMDL Report (TSS-1), at 7; TSS Response to Comment ## 1, 2, 19 (TSS-2), at 1, 4; EPA Gold Book Excerpts (TSS-48), at 4; JA). Finally, EPA noted that this TMDL was developed using the best information available and that the District should continue monitoring and evaluating whether implementation of this TMDL adequately protected Class A and B uses and revise the TMDL as necessary (TSS TMDL Report (TSS-1), at 7; JA).

EPA also concluded that the required load was appropriately expressed as a seasonal load. While submerged aquatic vegetation provides essential food and habitat for aquatic organisms every day throughout the year, EPA concluded that TSS concentrations in the water column do not substantially impact the submerged aquatic vegetation community outside of the growing season of April 1 to October 31 (TSS TMDL Report (TSS-1), at 36; Chesapeake SAV Report (TSS-55), at iv, 97; JA). Within the growing season, however, EPA determined that it was necessary to provide sufficient water column light penetration to protect the survival and growth of the submerged aquatic vegetation communities (TSS TMDL Report (TSS-1), at 26; JA). To put it another way, if TSS loads are

adequately controlled during the April 1 to October 31 growing season, such that TSS concentrations or water clarity is sufficient to allow adequate sunlight penetration to the submerged aquatic vegetation, then the organisms dependent on the vegetation for food and shelter will be protected on a daily basis throughout the year (TSS TMDL Report (TSS-1), at 26, 36; TSS Response to Comments ## 2, 12, and 20 (TSS-2), at 1, 3 and 4; Chesapeake SAV Report (TSS-55), at iv, 97; JA).

Moreover, because the environmental impacts of TSS occur when TSS reduces water clarity over numerous days during the growing season, EPA determined that a median seasonal concentration would be the appropriate measure to achieve water quality standards. To simulate the water quality impacts in a very complex and dynamic environment and to calculate appropriate TSS allocations for the Anacostia River, EPA used an updated version of the TAM/WASP model that the District used in establishing the BOD TMDL to provide accurate and reliable results for TSS (TSS TMDL Report (TSS-1), at 18-26; Calibration of the TAM/WASP Sediment Transport Model (TSS-51); JA). Using daily loads as well as other information relating to existing conditions in the model, (see TSS TMDL Report (TSS-1), at 20-22, 27; JA), EPA analyzed different scenarios with varying percentage reductions in the daily loads for TSS

in order to determine a load reduction scenario that would achieve the TSS seasonal median average of less than 15 mg/l on a daily basis (TSS TMDL Report (TSS-1), at 32-34; JA). EPA selected a scenario based on a reduction of approximately 77% in existing loads and incorporated a margin of safety (TSS TMDL Report (TSS-1), at 33, 36, 38; TSS Decision Rationale (TSS-1), at 8, 9; JA). Based on this analysis, EPA concluded that the TSS TMDL would achieve applicable water quality standards (TSS TMDL Report (TSS-1), at 8-10, 36; TSS Decision Rationale (TSS-1), at 1, 5-6, 8; JA).

D. The district court decision – The district court granted EPA’s motion for summary judgment and denied the cross-motion of the Friends of the Earth. The court first addressed the contention that the CWA requires that all TMDLs be established on a “daily” basis. Friends of the Earth v. EPA, 346 F. Supp.2d 182, 188-195 (D.D.C. 2004); (JA). Proceeding under the analysis mandated by Chevron U.S.A., Inc. v. NRDC, 467 U.S. 837 (1984), the court determined first that Congress had not expressed an unambiguous intent to impose such a requirement, concluding that the undefined phrase “total maximum daily load” must be assessed not in isolation but in the full context of the statutory provision. 346 F. Supp.2d at 190; (JA). That context included the statute’s direction that the TMDL be “established at a level necessary to implement the applicable water

quality standards,” as well as specific provisions of the CWA governing municipal storm water systems. 346 F. Supp.2d at 190-194; (JA). Given the complexity of the statutory scheme and the function of TMDLs as an intermediate tool for achieving compliance with water quality standards, the court could not conclude that Congress expressed an unambiguous intent that every TMDL be set on a daily basis, “when certain pollutants are more amenable to regulation through seasonal or annual calculations.” 346 F. Supp.2d at 190; (JA). Accordingly, the court determined that, under step two of the Chevron, analysis, the court was required to defer to EPA’s reasonable interpretation and application of the statute. Ibid. Here, the court held that EPA had reasonably established annual and seasonal loads because of the specific nature of the pollution problems being addressed. 346 F. Supp.2d at 194-195; (JA).

The court also held that EPA had reasonably determined that both TMDLs will achieve compliance with the applicable water quality standards. 346 F. Supp.2d at 195-202; (JA). With respect to the BOD TMDL, the court found that EPA had used reliable computer modeling in reaching its conclusions. 346 F. Supp.2d at 196-199; (JA). The court noted that the model accounted for variations in the projected daily loads of BOD, including large loads associated with storms, and that the TMDL imposed further reductions to assure compliance

with the dissolved oxygen standard. 346 F. Supp.2d at 197-198; (JA). With regard to the TSS TMDL, the court held that EPA had reasonably relied on the computer model and had also reasonably concluded that the large load reduction, 77%, would ensure attainment of the narrative WQS for turbidity, thereby protecting the aquatic life uses and the recreational and aesthetic uses as well. 346 F. Supp.2d at 200-201; (JA).

SUMMARY OF ARGUMENT

1. Friends of the Earth challenges EPA's approval of a TMDL established by the District of Columbia for the Anacostia River and EPA's establishment of another TMDL for the Anacostia River, which identify necessary reductions of between 30% and 90% below current pollutant discharge levels (depending on the source and the particular pollutant). Friends of the Earth contends that these TMDL are inadequate because they are stated as an annual or seasonal load rather than a "daily" load. Friends of the Earth is incorrect in arguing that the Clean Water Act requires TMDLs to be stated in terms of a 24-hour time period regardless of the nature of the pollutant, the specific characteristics of the water body or any other factor. Friends of the Earth's argument here is that the use of the word "daily" in the term "total maximum daily load" is an unambiguous statement that TMDLs have to be stated in the form of a 24-hour load and thus that

this issue is governed by a Chevron step one analysis. However, as the Second Circuit has recognized in Natural Resources Defense Council v. Muszynski, 268 F.3d 91 (2d Cir. 2001), an examination of the language in the full context of the statute, along with the structure and purpose of the legislation, shows that Congress has not unambiguously expressed an intent to require all TMDLs be set on a daily basis. Further, EPA has reasonably interpreted that term as allowing it to consider such factors as the nature of the pollutant and the characteristics of the water body in determining how to set each TMDL. EPA's long-standing statutory interpretation, incorporated into regulations more than 20 years ago, allowing for TMDLs expressed in time periods of other than 24-hour days is permissible and should be upheld.

2. Further, contrary to Friends of the Earth's contention, EPA's approval of a biochemical oxygen demand TMDL expressed in annual terms and its establishment of a total suspended solids TMDL expressed in seasonal terms are both reasonable because those TMDLs are protective of the applicable water quality standards. To judge whether an annual BOD TMDL was adequate to protect the applicable water quality standard (expressed as a daily standard), the District and EPA used computer modeling that simulated the daily water quality in the Anacostia River at different levels of BOD discharges. Similarly, to evaluate

whether the TSS TMDL was adequate to protect the applicable water quality standard, EPA used computer modeling that simulated the daily water quality in the Anacostia River at different levels of TSS discharges. From this modeling and using its own judgment, EPA reasonably concluded that the annual BOD TMDL and the seasonal TSS TMDL at issue in this litigation identified pollutant reductions sufficient to achieve the applicable water quality standards. On judicial review, EPA's application of its expertise is entitled to controlling weight.

Lastly, with respect to Friends of the Earth's claim that EPA failed to address recreational and aesthetic uses in establishing the TSS TMDL, EPA reasonably concluded that a TSS load that would restore aquatic life uses (that is, fish, shellfish and wildlife, as well as the aquatic vegetation that forms the base of their food chain) would also adequately protect the Anacostia River for recreational and aesthetic uses.

ARGUMENT

I. A TMDL MAY BE EXPRESSED AS A LOAD LIMITATION FOR ANY APPROPRIATE TIME PERIOD THAT WILL ACHIEVE THE APPLICABLE WATER QUALITY STANDARD

A. Standard of review. – This Court reviews statutory interpretations de novo. Butler v. West, 164 F.3d 634, 639 (D.C. Cir. 1999). The Court must first

consider whether Congress has directly addressed the question at issue. If so, "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." Chevron U.S.A., Inc. v. NRDC, 467 U.S. 837, 842-43 (1984). However, if the statute is silent or ambiguous on an issue, the Court must accept the agency's interpretation if it is reasonable; the agency's interpretation need not represent the only permissible reading of the statute nor the reading that the Court might originally have given the statute. Id. at 843 & n.11.

B. A TMDL established under Section 303(d) is not required to be expressed as a daily limit on discharges. – Friends of the Earth contends that a TMDL stated in terms of any time period that is longer or shorter than 24 hours is precluded by the Clean Water Act, regardless of the nature of the pollutant, the specific characteristics of the water body or any other factor. In support of this argument, Friends of the Earth contends that the use of the word “daily” in the statutory term “total maximum daily load” is an unambiguous statement that TMDLs must be stated in the form of a 24-hour load and thus that this issue is governed by a Chevron step one analysis (Br. 11-17). As demonstrated below, this argument is without merit.

1. Congress has not expressed an unambiguous intent regarding how a TMDL should be expressed. – "In determining whether Congress has specifically addressed the question at issue, a reviewing court should not confine itself to examining a particular statutory provision in isolation. The meaning -- or ambiguity -- of certain words or phrases may only become evident when placed in context." FDA v. Brown & Williamson Tobacco Corp., 529 U.S. 120, 132 (2000). Indeed, "[i]t is a fundamental canon of statutory construction that the words of a statute must be read in their context and with a view to their place in the overall statutory scheme." Ibid. (citations and internal quotations omitted). Moreover, this Court has held that "the Clean Water Act is to be given a reasonable interpretation which is not parsed and dissected with the meticulous technicality applied in testing other statutes and instruments" and "any ambiguities as to the EPA Administrator's powers under the Clean Water Act are to be resolved in his favor." Environmental Defense Fund, Inc. v. Costle, 657 F.2d 275, 292 (D.C. Cir. 1981).

Because the CWA neither defines a TMDL nor specifies how a TMDL should be expressed, the crucial context for the phrase "total maximum daily load" is the language of Section 303(d)(1)(C), which 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 1314(a)(2) of this title as suitable for such calculation. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.

33 U.S.C. § 1313(d)(1)(C). That Congress took the step of elaborating on what a TMDL should be is a strong indication that it was not using the word “daily” as the exclusive expression of its intent on the question of how a TMDL should be established. Thus, the district court correctly concluded “the term ‘daily’ from ‘total maximum daily load’ should not be read in isolation as a sacred signifier and bring an end to judicial review.” 346 F. Supp.2d at 190; JA .

Further, the context supplied by Section 303(d)(1)(C) establishes that the crucial hallmark and function of a TMDL is to set a “level necessary to implement the applicable water quality standards.” 33 U.S.C. § 1313(d)(1)(C). As explained supra, pp. 5-6, TMDLs are established where technology based limitations fail to satisfy the water quality standards. And TMDLs do not themselves impose limits or restrictions to achieve compliance with the water quality standards. Rather, they are “informational tools” (Pronsolino, 291 F.3d at 1123) identifying loads and reductions that, if implemented through the permitting process for point sources,

and through other means for nonpoint sources, will result in the attainment of the water quality standards. As such, TMDLs will be developed in a wide variety of circumstances to address many different types of pollution problems.

In EPA's experience, to achieve water quality standards, TMDLs must be expressed in terms that are appropriate for the characteristics of both the specific waterbody (e.g., a river, stream, pond, lake or reservoir) and the particular pollutant. In determining the most appropriate time period for a TMDL, various factors may be relevant, including (1) the physical characteristics of the waterbody, such as the speed that water moves through the waterbody, (2) the nature of the pollutant and how it impacts water quality, (3) the manner and frequency that the pollutant enters the waterbody, and (4) the optimum approach to controlling the sources of the pollutant to achieve water quality standards. See 65 Fed. Reg. 43586, 43629-43630 (July 13, 2000); 64 Fed. Reg. 46012, 46031 (August 23, 1999).

In the calculation of many TMDLs, it is appropriate to use a 24-hour time period, as for example, may be the case for some pollutants discharged from point sources in a predictable and continuous manner. For other TMDLs, however, the use of a non-daily load (such as a weekly, monthly, seasonal or annual load) is a reasonable approach, consistent with both longstanding EPA regulation and

guidance. See 40 C.F.R. § 130.2(i) ("TMDLs can be expressed in terms of either mass per time, toxicity or other appropriate measure"); 50 Fed. Reg. 1779, 1776 (Jan. 11, 1985) ("TMDLs ... may be expressed in terms of an appropriate averaging period, such as weekly or monthly, as long as compliance with applicable [water quality standards] is assured"). See also 64 Fed. Reg. 46031 (August 23, 1999). In this case, the pollutants of concern -- BOD and TSS -- primarily enter the Anacostia River during rainstorms. Thus, the discharges of BOD and TSS will vary widely from one day to the next. Further, these TMDLs properly account for the manner in which BOD and TSS impact water quality. BOD pollutants affect water quality indirectly by fueling a variety of biological and chemical reactions that "demand" (that is, reduce) dissolved oxygen in the water. These reactions are dependent on such factors as temperature, biological activity, sunlight, tides, and volume and speed of flow of water in the river (TAM/WASP Model (BOD-48), at 35-66; JA). This variable reaction rate means that BOD pollutants discharged today may not cause a problem today, but can accumulate and under certain conditions affect dissolved oxygen levels in the Anacostia River in the future (TAM/WASP Model (BOD-48), at 73; JA). Total suspended solids ("TSS") can have a negative physical effect in that they block sunlight from reaching the submerged aquatic vegetation, which prevents or slows

photosynthesis and thus impacts the growth and survival of such vegetation. For this reason, TSS discharges are not significant because they occur on any given day, but rather when they reduce water clarity overall within the growing season to the extent that the reduced sunlight affects the growth and survival of submerged aquatic vegetation (TSS TMDL Report (TSS-1), at 38; JA).

Thus, in the context of Section 303(d)'s express elucidation of the purpose of establishing TMDLs, "to implement the applicable water quality standards," and the complexity of the various circumstances in which water pollution problems are presented, it is plain that Congress has not, by the use of the term "daily," expressed an unambiguous intent that all TMDLs should be expressed as daily loads. Accordingly, this Court should review EPA's interpretation under a Chevron step two analysis.⁷⁷

In the only other decision to address and resolve this question, the Second Circuit rejected the precise argument presented by Friends of the Earth and found

⁷⁷ Indeed, in other portions of the Clean Water Act, including the recently enacted Section 402(q), 33 U.S.C. 1342(q), Congress has recognized that some types of regulated discharges are driven by periodic precipitation events, and in that way may differ from the traditional concept of daily, end-of-pipe discharges. See 33 U.S.C. § 1342(p) (addressing municipal and industrial storm water discharges); § 1342(q) (combined sewer overflows).

that TMDLs could be expressed in terms of time periods other than a 24-hour day.

Natural Resources Defense Council v. Muszynski, 268 F.3d 91 (2d Cir. 2001):

If the language of the statute is as plain as [Plaintiff] urges, [Plaintiff's] reading of the statute easily prevails. The CWA calls for establishment of a "total maximum daily load," not an hourly, weekly, monthly or annual load. We believe, however, that the term "total maximum daily load" is susceptible to a broader range of meanings. Indeed, [Plaintiff's] overly narrow reading of the statute loses sight of the overall structure and purpose of the CWA. The CWA contemplates the establishment of TMDLs for an open-ended range of pollutants that are susceptible to effective regulation by such means. See 33 U.S.C. § 1313(d)(1)(C) (noting that states must establish TMDLs for all "pollutants which the Administrator identifies ... as suitable for such calculation"). In the case of each pollutant, effective regulation requires agencies to determine how the pollutant enters, interacts with, and, at a certain level or under certain conditions, adversely impacts an affected waterbody. In the case of highly toxic pollutants that may work harmful effects upon a waterbody almost immediately when present at small levels, close regulation at a daily level may be most appropriate. In the case of other pollutants, like phosphorus, the amounts waterbodies can tolerate vary depending upon the waterbody and the season of the year, while the harmful consequences of excessive amounts may not occur immediately. In short, the CWA's effective enforcement requires agency analysis and application of information concerning a broad range of pollutants. We are not prepared to say Congress intended that such far-ranging agency expertise be narrowly confined in application to regulation of pollutant loads on a strictly daily basis. Such a reading strikes us as absurd, especially given that for some pollutants, effective regulation may best occur by some other periodic measure than a diurnal one. Accordingly, we agree with EPA that a "total maximum daily load" may be expressed by another measure of mass per time, where such an alternative measure best serves the purpose of effective regulation of pollutant levels in waterbodies.

268 F.3d at 98-99. This Court should reach the same result here.³⁷

2. Friends of the Earth has failed to show that Congress unambiguously intended to require all TMDLs to be expressed as daily loads. – None of the Friends of the Earth’s arguments justifies its reliance on the ordinary meaning of a single term, “daily,” to establish Congress’ intent.

First, Friends of the Earth has not shown that the statutory context compels its desired result. Friends of the Earth points to the part of Section 303(d)(1)(C) where Congress required TMDLs “for those pollutants which the Administrator identifies under section 1314(a)(2) of this title as suitable for such calculation.” 33 U.S.C. § 1313(d)(1)(C). The cross-referenced section required EPA to publish information “on the identification of pollutants suitable for maximum daily load measurement correlated with the achievement of water quality objectives.” 33

³⁷ Friends of the Earth suggests that two other courts have decided that a Chevron step one analysis precludes EPA from approving or establishing TMDLs based on time periods other than a 24-hour day (Br. 14, citing Scott v. Hammond, 741 F.2d 992 (7th Cir. 1984), and Sierra Club v. Hankinson, 939 F. Supp. 865, 869 (N.D. Ga. 1996)). In fact, neither of these cases addressed the issue of whether TMDLs with non-daily time periods were permissible. Both of these cases were efforts to force establishment of TMDLs where none existed. Scott v. Hammond, 741 F.2d at 997 (“The allegation of the complaint that no TMDL’s are in place, coupled with the EPA’s admission that the states have not made their submissions, raises the possibility that the states have determined that TMDLs for Lake Michigan are not necessary.”); Sierra Club v. Hankinson, 939 F. Supp. at 869 (action concerned a challenge to an alleged failure by EPA to establish TMDLs in light of the state’s alleged failure to submit TMDLs to EPA for review).

U.S.C. § 1314(a)(2)(D). This provision uses the same language as Section 303(d)(1)(C), but it does not address what a TMDL should contain or how it will function in the statutory scheme. Accordingly, it does not negate the context supplied by Section 303(d)(1)(C) itself, which elaborates that TMDLs are to “implement water quality standards.”

Friends of the Earth also seeks to downplay the significance of Section 303(d)(1)(C)’s directive to set TMDLs to “implement water quality standards” by arguing (Br. 13-14) that it must be regarded as stating requirements for a TMDL independent of the directive to establish a “total maximum daily load,” and that to read it as supporting the agency’s discretion to choose an appropriate expression for a TMDL impermissibly reads the word “daily” out of the statute. To the contrary, by elucidating what a TMDL is meant to do in this complex statutory scheme, this critical portion of Section 303(d)(1)(C) demonstrates that Congress cannot be taken to have expressed its intent exclusively in its use of the word “daily.”

Likewise, the fact that Section 303(d)(1)(C) requires a TMDL to “implement applicable water quality standards with seasonal variations” does not demonstrate that Congress had an unambiguous intent to require all TMDLs to be daily. Rather than casting the phrase “total maximum daily load” into stone, this

part of Section 303(d)(1)(C) shows that Congress recognized that TMDL development would take place for a broad range of circumstances and should account for temporal variations in water quality and pollutant discharges.

Friends of the Earth's reliance on legislative history (Br. 14) is equally misplaced. The report of the House Committee on Public Works and the Conference Report both simply restate the provisions of Section 303(d)(1)(C) with no explanation. See Committee on Public Works, A Legislative History of the Water Pollution Control Act Amendments of 1972, 92d Cong., at 753, 793, 281, 306 (Comm. Print. 1973). These reports shed no more light on Congress' intent than the language of the statute.

Finally, Friends of the Earth mistakenly relies (Br. 16, 18) on the principle employed by this Court in other cases that where the meaning of a statutory provision is "clearly expressed in the text," a party advocating a different meaning "must show either that, as a matter of historical fact, Congress did not mean what it appears to have said, or that, as a matter of logic and statutory structure, it almost surely could not have meant it." Engine Manufacturers' Association v. EPA, 88 F.3d 1075, 1089 (D.C. Cir. 1996). See State of New York v. EPA, 413 F.3d 3, 41 (D.C. Cir. 2005); Appalachian Power Co. v. EPA, 249 F.3d 1032, 1041 (D.C. Cir. 2001). As we have shown, this is not a case where Congress' intent is

“clearly expressed in the text.” The statute directs the establishment of a TMDL for waterbodies not meeting water quality standards, and without otherwise defining the term, directs that they be established to “implement the applicable water quality standards.” This is simply not a clear enough expression of intent to make all TMDLs set loads on a daily basis, and EPA bore no burden to show that Congress made a “scrivener’s error” when it used the word “daily” in Section 303(d)(1)(C). As the district court in Muszynski correctly concluded, “Congress, in one sentence, directs EPA to approve TMDLs for hundreds of different pollutants in thousands of different waterbodies, and it is excessively formalistic to suggest that EPA may not express these standards in different ways, as appropriate to each unique circumstance.” NRDC v. Fox, 93 F. Supp.2d 531, 555. (S.D.N.Y. 2000).

3. EPA’s interpretation of Section 303(d)(1)(C) is reasonable and should be accepted under *Chevron* step two. – Filling in the gap left by the absence of a statutory directive or definition of a TMDL, EPA has interpreted Section 303(d) to require that a TMDL be “expressed in terms of either mass per time, toxicity, or other appropriate measure.” 40 C.F.R. § 130.2(i). As EPA explained when it issued this interpretation in 1985, “TMDLs * * * may be expressed in terms of an appropriate averaging period, such as weekly or monthly, as long as compliance

with applicable [water quality standards] is assured." 50 Fed. Reg. at 1774, 1776 (Jan. 11, 1985). This statutory interpretation, which "fills a gap [and] defines a term in a way that is reasonable in light of the legislature's revealed design," is entitled to "controlling weight." NationsBank of N.C., N.A. v. Variable Annuity Life Ins. Co., 513 U.S. 251, 257 (1995) (quoting Chevron U.S.A. v. NRDC, 467 U.S. 837, 844 (1984)).

As we have discussed, a 24-hour measure is not necessarily appropriate for all waterbodies or for all pollutants, as illustrated by this case. See pp. 27-29, supra. Indeed, if EPA were to approve or establish TMDLs as 24-hour figures by rote, with no consideration of the specific characteristics of the water body and the pollutant, that would likely be arbitrary and capricious. Making determinations in light of the specific facts before the agency is consistent with the Clean Water Act, is good administrative decisionmaking, and should be upheld.

Contrary to the contention of Friends of the Earth (Br. 27-28), EPA's interpretation does no violence to the statutory provision, but rather is faithful to the intent of Congress to utilize TMDLs to achieve water quality standards where the technology-based effluent limitations are insufficient for that purpose. Friends of the Earth simply harks back to the word "daily" (Br. 27), and fails to demonstrate that EPA's conclusion, based on its extensive experience and

expertise, that varying circumstances make various ways of expressing TMDLs appropriate was irrational. Consequently, under step two of Chevron, EPA's interpretation is entitled to deference and should be accepted by this Court.

II. EPA'S APPROVAL OF THE BOD TMDL AND ESTABLISHMENT OF THE TSS TMDL IS NOT ARBITRARY, CAPRICIOUS, AN ABUSE OF DISCRETION, OR CONTRARY TO LAW

A. Standard of review. – The Administrative Procedure Act ("APA"), 5 U.S.C. §§ 551-559, 701-706, establishes a highly deferential standard of review for agency action. Agency action is valid unless, inter alia, it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A).

This standard of review presumes the validity of agency action. Ethyl Corp. v. EPA, 541 F.2d 1, 34 (D.C. Cir. 1976) (en banc). The standard "is a narrow one," under which the court is not "to substitute its judgment for that of the agency." Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 416 (1971); Dioxin/Organochlorine Center v. Clarke, 57 F.3d 1517, 1521 (9th Cir. 1995). If the agency's reasons and policy choices conform to "certain minimal standards of rationality," the action is reasonable and must be upheld. Small

Refiner Lead Phase-Down Task Force v. EPA, 705 F.2d 506, 521 (D.C. Cir. 1983).

When the agency's decision rests on an evaluation of complex scientific data within the agency's technical expertise, as it does in this case, courts are "extremely deferential." New York v. Reilly, 969 F.2d 1147, 1152 (D.C. Cir. 1992). Where the agency decision turns on issues requiring the exercise of technical or scientific judgment, the court "must look at the decision not as the chemist, biologist, or statistician that [it is] qualified neither by training nor experience to be, but as a reviewing court exercising [its] narrowly defined duty of holding agencies to certain minimal standards of rationality." Ethyl Corp. v. EPA, 541 F.2d at 36.

B. EPA reasonably determined the BOD TMDL will implement the applicable water quality standard. – On the record in this case, EPA reasonably concluded that the District's BOD TMDL would assure attainment of the dissolved oxygen standard on a daily basis. As discussed above, see pp. 11-13, supra, EPA relied on the TAM/WASP model to reach its conclusions. Friends of the Earth has not and cannot demonstrate that the choice of this model was unreasonable. National Wildlife Fed'n v. EPA, 286 F.3d 554, 565 (D.C. Cir. 2002) ("We may reject an agency's choice of a scientific model 'only when the

model bears no rational relationship to the characteristics of the data to which it is applied.”) (citations omitted).

Friends of the Earth’s argument to the contrary is that EPA could not rationally find that the water quality standard will be met by an annual average load because the model does not account for “large,” short-term peaks in discharges of BOD and because the model used varying daily inputs for discharges, not an annual average input (Br. 28-30). But the model is in fact structured to provide a reliable prediction of likely actual conditions. It achieves that goal by relying on historical data to calibrate the model, data for storm events, discharges and water quality measurements for the three-year period 1988-1990, which includes both a relatively dry and a relatively wet year, and by relying on ten years of historical data to verify the accuracy of the model (BOD TMDL Report (BOD-1), at 6-7; TAM/WASP Model (BOD-48), at 66, 98; JA). The model then simulated actual in-stream conditions by testing several scenarios of different levels of reduction in the discharges, which were based on daily inputs of varying values for those discharges, and provided results in terms of daily average dissolved oxygen values (BOD Decision Rationale (BOD-1), at 9, 14, 16, 20; BOD TMDL Report (BOD-1), at 7-8; TAM/WASP Model (BOD-48), at 35, 73-77, 95-96; JA).

Because it is impossible to know the precise dates for storm events in the future, a model projecting future conditions based on representative historical conditions is the best substitute, and far more reliable than a calculation based on the wholly unrealistic assumptions that underlie the Friends of the Earth's arguments, i.e., that in any one year, the entire allowable load will be discharged in one storm event, or divided between two or three such events. Neither is the model shown to be deficient by reliance on the abstract, mathematical possibility that an annual average load could be met by discharging the entire load on one day and having no discharges the rest of the year. The fact that the Friends of the Earth is able to point to one historical event where there was a sudden depletion of oxygen leading to a fish kill does not make the model defective (Br. 34).

A similar flaw is found in the Friends of the Earth's reliance on the draft Long Term Control Plan prepared by WASA, which Friends of the Earth suggests shows that the BOD TMDL would allow some combined sewer overflows each year and that, as a result, the dissolved oxygen water quality standard will be exceeded (Br. 30-31). This argument fails to recognize that the predictions by WASA in their draft Long Term Control Plan are based on different reductions than the BOD TMDL at issue here. For example, WASA's draft Long Term Control Plan assumed a 40% reduction of District and Maryland discharges of

storm water BOD and nutrients, while the final BOD TMDL identifies as necessary a 50% reduction of District and Maryland storm water discharges of BOD, a 30% reduction of District and Maryland discharges of nutrients, a further reduction of 17,224 pounds of BOD from Maryland, and a further 1% reduction of all discharges to provide a further margin of safety (WASA Long Term Control Plan - Draft Report (June 2001), at 9-22, Table 9-6, note 1; BOD Decision Rationale (BOD-1), at 20, 27 JA).^{2/}

Further, EPA agrees that the BOD TMDL recognizes that there will be some overflow events, but the TAM/WASP model -- and thus the TMDL -- specifically accounts for those events in the daily simulation of dissolved oxygen in the Anacostia River (BOD Decision Rationale (BOD-1), at 20; JA) (noting that TMDL -- which assumes reductions from other sources -- would achieve water quality standards when BOD loadings from combined sewer overflows are reduced by 90% but not entirely eliminated).

^{2/} One cannot look at the BOD pollutant discharges from CSOs in isolation; the total impact of BOD pollutant discharges is based on the total discharges from all sources, not just CSOs. Indeed, the portion of the record cited here by Friends of the Earth demonstrates this point. In WASA's draft Long Term Control Plan (Table 9-7 at 9-23; JA), the loads from CSOs under the various scenarios remain constant at 152,906 pounds, but the scenarios use very different load figures for other BOD discharges, ranging from zero to 754,965 pounds.

Finally, as Friends of the Earth recognizes, the model is built on daily inputs of varying levels of discharges, but that fact does not undermine or invalidate the decision to express the TMDL as an annual average load (Br. 34). What the model demonstrates are the in-stream impacts on a daily basis, and thus how the loads will or will not meet the water quality standard. But because one cannot predict the future, and thus cannot assign a particular level of load to a particular future day to match the modeled conditions, expressing the load as an annual average load is appropriate so long as the water quality standard is met. EPA reasonably relied on the modeling to conclude that condition would be satisfied, and Friends of the Earth has provided no basis for overturning the agency's expert resolution of such technical questions.¹⁰

¹⁰ Contrary to Friends of the Earth's argument (Br. 33-34), the record shows that the effects of accumulated BOD pollutants in the sediment on dissolved oxygen levels are accounted for to a certain degree in the TAM/WASP model. The overall TAM/WASP model is composed of three sub-models: (1) a "hydrodynamic sub-model" that simulates the movement of water and suspended constituents in the river, (2) a "sediment exchange sub-model" that simulates exchanges of constituents (including BOD pollutants) between of the sediment and the water column, and (3) a "water quality sub-model" that simulates the various chemical and biological processes that affect dissolved oxygen levels in the water column (BOD Decision Rationale (BOD-1), at 9; JA). Within the TAM/WASP model, the sediment exchange sub-model addresses the continuing impacts of BOD pollutants that have settled in the sediment (TAM/WASP Model (BOD-48), at xi (discussing the addition of the sediment oxygen demand model to TAM/WASP in the early 1990's) and 67-71 (technical discussion of sediment exchange sub-

(continued...)

C. EPA reasonably determined the TSS TMDL will implement the applicable water quality standard. – The seasonal concentration for total suspended solids selected by EPA is an appropriate measure for the TSS TMDL for the Anacostia River. The TSS TMDL addresses the turbidity caused by TSS that impacts aquatic life in the Anacostia River, and it assures the attainment of the applicable water quality standards.

Friends of the Earth argues that EPA's TSS TMDL improperly focuses on the protection of aquatic life and fails to protect recreational and aesthetic uses of the Anacostia River. Contrary to Friends of the Earth's assertion (Br. 38), EPA did not exclude recreational and aesthetic uses. In the TMDL, EPA recognized that turbid water generally interferes with recreational use and aesthetic enjoyment of water (TSS Decision Rationale (TSS-1), at 6-7; JA). EPA reasonably concluded, however, that it was not necessary to try to develop an additional, specially tailored, numerical TSS endpoint to protect those uses. This is because there was an objective numerical endpoint for an objective environmental problem

^{10/}(...continued)

model; JA). See also WASA Long Term Control Plan - Draft Report (June 2001), at 9-21 (JA) (noting that TAM/WASP model includes modeling of the sediment oxygen demand and discussing how testing with the model showed that changes in BOD loads caused effects that were realized over a period of years.). EPA plainly based its conclusions in significant part on the model and necessarily relied on the degree to which the model incorporated sediment effects.

– the loss of submerged aquatic vegetation – based on the considerable scientific analysis of the Chesapeake Bay (TSS Decision Rationale (TSS-1), at 6-7; JA). EPA also noted that TSS reductions associated with attaining the aquatic life numeric endpoint, a large reduction of 77%, would also make the water more desirable for recreation, thereby addressing the more subjective recreational and aesthetics goals through the achievement of the objective aquatic life target. Finally, EPA noted that, if the aquatic life endpoint proved insufficient to protect recreational uses, the TMDL could be revised to reflect a new TSS endpoint specifically calculated for that purpose. See p.

17, supra.

EPA does not dispute that broad narrative criteria, such as the turbidity criteria as it applies to recreational and aesthetic uses, can be implemented and that it would be possible, through surveys and intensive data gathering, to develop a numerical endpoint for the protection of recreational uses.¹¹⁷ At issue here, however, is whether it was reasonable for EPA -- under all the circumstances -- to base this TMDL instead on an objectively derived endpoint (reflecting considerable data associated with EPA's Chesapeake Bay study) to address an

¹¹⁷ Accordingly, EPA's position here is fully consistent with Public Utility District No. 1 v. Washington Department of Ecology, 511 U.S. 700 (1994).

undisputed environmental problem. Friends of the Earth has not shown EPA's conclusion to be arbitrary or capricious.

Friends of the Earth's reliance on U.S. Air Tour Ass'n v. FAA, 298 F.3d 997, 1017 (D.C. Cir. 2002), is misplaced (Br. 39-40). In U.S. Air Tour, the court found that the FAA's use of an annual average for noise limits at the Grand Canyon was not appropriate because the "typical visitor" at the Grand Canyon visited for "just a few days during the peak summer season." 298 F.3d at 1017. By contrast, recreational use of the Anacostia River does not show the same pattern as the Grand Canyon for the "typical visitor." Though there are no doubt some persons who only use the river occasionally, the declarations presented by Friends of the Earth describe frequent, repeated use of the Anacostia River year round, not just visits for a couple of days during certain seasons (Declaration of James Connelly, at ¶¶ 2-3, 6; Declaration of Damon Whitehead, at ¶¶ 2-3; Declaration of Duncan Spencer, at ¶1; JA). Thus, though turbid water might reduce the enjoyment of the river for some people on some days, the TSS TMDL will ensure that the overall recreational and aesthetic use of the river will be improved and protected.

A fundamental flaw in Friends of the Earth's argument on this point is that Friends of the Earth relies on declarations from persons who complain about water

clarity under the current levels of TSS discharges, rather than present evidence that water clarity will continue to be objectionable after the reductions in TSS discharges identified in the TSS TMDL. The TSS TMDL identifies a needed 77% reduction in TSS discharges. Based on its analysis, EPA concluded that the TSS TMDL would achieve applicable water quality standards (TSS TMDL Report (TSS-1), at 8-10, 36; TSS Decision Rationale (TSS-1), at 1, 5-6, 8; JA). Although Friends of the Earth has presented various declarations pointing to objectionable turbidity in the past and present, Friends of the Earth has not presented any analysis, data, modeling or any other basis for concluding that “objectionable turbidity” would continue in the future with a 77% reduction in TSS discharges from current loads. For all these reasons, EPA’s TSS TMDL should be upheld.

CONCLUSION

For the reasons set out above, the judgment of the district court should be affirmed.

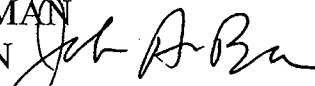
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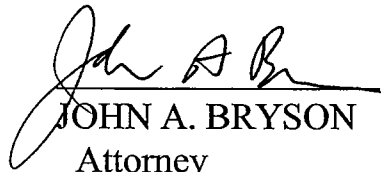
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CERTIFICATE OF COMPLIANCE

I certify that pursuant Rule 32(a)(7)(C), Fed. R. Appellants. P., the attached Initial Brief for the Federal Appellees is proportionately spaced, has a typeface of 14 points or more, was prepared using Corel WordPerfect Version 9.0, and contains 10,585 words.



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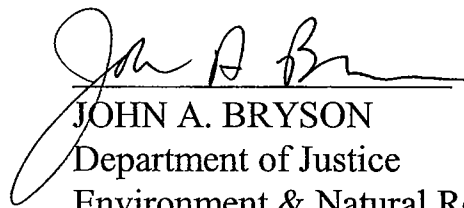
I hereby certify that two copies of the foregoing Initial Brief for the Federal Appellees were served this 11th day of October, 2005, by first-class mail, postage prepaid, on the following counsel of record:

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