

FRIENDS OF THE EARTH

Case No. 04-92 (RMU)

Judge Ricardo M. Urbina

Defendants.

June 17, 2004

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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

Defendants United States Environmental Protection Agency and Michael O. Leavitt, Administrator, United States Environmental Protection Agency (collectively, "EPA") move this Court for an order granting summary judgment for EPA and against Plaintiff Friends of the Earth, and opposes Plaintiff's Motion for Summary Judgment.

INTRODUCTION

Under the Clean Water Act, States (including the District of Columbia) establish water quality standards and identify those waters that do not achieve those standards, which are known as "impaired waters." One important tool for achieving water quality standards in impaired waters is the "total maximum daily load" (or "TMDL"), which expresses the total amount of a given pollutant that an impaired water may receive and still achieve applicable water quality standards.

In the calculation of many TMDLs, it is appropriate to use a 24-hour time period. 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 EPA regulation and guidance. 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 pollutant to achieve water quality standards.

In this case, Plaintiff challenges EPA's approval of a TMDL established by the District of Columbia for the Anacostia River and EPA's own establishment of another TMDL for the Anacostia River. These TMDLs will address long-standing water pollution problems that effect the Anacostia River as a habitat for aquatic life and a place for recreation and aesthetic enjoyment. Despite the fact

that these TMDLs provide for reductions of between 30% and 90% below current pollutant discharge levels (depending on the source and the particular pollutant), Plaintiff contends that these TMDL are inadequate because they are stated as an annual or seasonal load rather than a “daily” load and for certain other reasons.

With respect to Plaintiff’s argument that the challenged TMDLs should have been stated on a 24-hour basis, there are at least three significant factors that led to the establishment of these TMDLs as an annual or seasonal load. First, while some pollutants from some types of point sources are discharged in a predictable and continuous manner (and thus are conducive to the establishment of a daily TMDL), the pollutants in this case -- oxygen demanding pollutants (often referred to as “biochemical oxygen demand” or “BOD” pollutants) and total suspended solids (“TSS”) – primarily enter the Anacostia River during rainstorms. Thus, the discharges of BOD and TSS will vary widely from one day to the next.

Second, BOD and TSS are pollutants that not only cause immediate impacts on water quality at the time of discharge, but also accumulate in the sediments of the Anacostia River over time. Then, in later rainstorms, the accumulated BOD and TSS are resuspended into the water and have further impacts on water quality. Thus, the TMDLs for BOD and TSS in the Anacostia River reasonably take into account the longer-term accumulation and resuspension of these pollutants, not just the amounts that may be discharged on any given day.

Third, these TMDLs properly consider 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. This variable reaction rate, coupled with the accumulation and resuspension of BOD as discussed above, 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. 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.

For these reasons, and as discussed further below, EPA has concluded that the water quality standards associated with BOD and TSS will be achieved in the Anacostia River by setting the TMDLs for these pollutants on an annual basis (for BOD) and a seasonal basis (for TSS), rather than the daily basis that may be appropriate under circumstances different from those presented here.

Plaintiff's other criticisms of these TMDLs are equally misplaced, fail to acknowledge that these TMDLs establish significant reductions in the volume of pollutant discharges and, most importantly, that these TMDLs are calculated to achieve the applicable water quality standards. In all respects, EPA's approval of the District's BOD TMDL and its establishment of the TSS TMDL were reasonable, in compliance with the Clean Water Act and protective of the environment.

STATUTORY BACKGROUND

The Clean Water Act, 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).

Clean Water Act § 303 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).

To facilitate imposition 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 violating 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;^{1/} (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).^{2/} In contrast, load allocations for nonpoint sources are implemented through voluntary and/or cooperative approaches, and in some cases as required by State or local law. See Pronsolino v. Nastri, 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).

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

^{1/} 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.

^{2/} Permits must include effluent limitations necessary to protect water quality 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.

"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, 417 (1971). 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).

With regard to questions of statutory interpretation, 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.

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.

SUMMARY OF ARGUMENT

First, Plaintiff may not in this case argue that EPA has no legal authority to approve or establish TMDLs expressed in time periods of other than 24-hours, because that legal authority was not challenged by Plaintiff nor anyone else following EPA's 1985 promulgation of regulations interpreting the Clean Water Act as giving the Agency that legal authority.

Moreover, even if Plaintiff could raise the legal authority issue here, Plaintiff 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. Plaintiff'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 1 analysis. However, as the Second Circuit has recognized, the term "total maximum daily load" is ambiguous, and 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 allowing for TMDLs expressed in time periods of other than 24-hour days is permissible and should be upheld.

Further, contrary to Plaintiff's contention, EPA's approval of a BOD TMDL expressed in annual terms and its establishment of a TSS 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. As discussed below, from this modeling and the use of EPA's technical judgment, EPA reasonably concluded that the annual BOD TMDL and the seasonal TSS TMDL at issue in this litigation were sufficient to achieve the applicable water quality standards.

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

Third, Plaintiff's argument that these TMDLs failed to establish loads for nutrients is factually incorrect. As approved by EPA, the BOD TMDL established loads for nitrogen and phosphorus.

Fourth, contrary to Plaintiff's claim, these TMDLs do establish individual waste load allocations for each regulated point source, by establishing a specific percent reduction and baseline pollutant loading applicable to each source.

Fifth, contrary to Plaintiff's contention, EPA considered and addressed the continuing impacts of the BOD pollutants that flow into and through the District from Maryland.

ARGUMENT

I. EPA MAY APPROVE OR ESTABLISH TMDLS THAT ARE EXPRESSED IN ANNUAL OR SEASONAL TERMS, AND SUCH TMDLS WERE APPROPRIATE HERE.

A. Plaintiff May Not Challenge EPA's Legal Authority To Approve Or Establish TMDLs Expressed As Time Periods Other Than 24 Hours, Because Plaintiff Did Not Raise This "Legal Authority" Issue Previously.

In this case, Plaintiff seeks to challenge EPA's statutory interpretation allowing TMDLs to be expressed in terms of time periods other than 24-hours. Such a challenge to EPA's statutory interpretation is barred, because that interpretation was not challenged when it was established by regulation in 1985.

The EPA statutory interpretation at issue here was established by regulation 19 year ago, when EPA promulgated a 1985 rule stating that "TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure." 50 Fed. Reg. at 1780/1 (promulgating 40 C.F.R. § 130.2(i)). In the preamble to that 1985 rule, EPA stated that "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 1776/1. The interpretation in that 1985 rule was not challenged by Plaintiff or anyone else at the time and, 19 years later, it is too late to challenge it now.^{3/}

^{3/} Regardless of whether a challenge to that 1985 regulation would have subject to the 120-day limitations period in 33 U.S.C. § 1369(b) or the six-year limitations period applicable to APA claims under 28 U.S.C. § 4201(a), Plaintiff's challenge is clearly too late after 19 years.

B. The Clean Water Act Does Not Preclude EPA From Approving Or Establishing TMDLs Expressed In Time Periods Other Than 24-Hour Days.

Even if this Court could consider Plaintiff's "legal authority" argument, this Court should find that EPA has the legal authority to approve and/or establish TMDLs expressed in time periods other than 24 hours.

Plaintiff contends that the Clean Water Act requires TMDLs to be expressed as a quantity of pollutant over a 24-hour day and allows no other measure. Plaintiff's Br. at 13-17. According to Plaintiff, 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, Plaintiff 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 I analysis. Plaintiff's Br. at 13. As demonstrated below, Plaintiff's argument is without merit.

"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." Id. (citations and internal quotations omitted). Moreover, "[c]ourts have 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 [her] favor." Environmental Defense Fund, Inc. v. Costle, 657 F.2d 275, 292 (D.C. Cir. 1981).

The Clean Water Act neither defines a TMDL nor specifies how a TMDL should be expressed. Rather, the Act is silent on the precise issue, leaving it to the State or EPA (depending on who is establishing the TMDL) to determine the most appropriate measure to express the maximum load for each individual waterbody and for each pollutant of concern. Given the context and complexities of the Clean Water Act, the word "daily" in Section 303(d) simply cannot sustain the weight of Plaintiff's interpretation, and this Court should review EPA's interpretation under a Chevron Step II analysis.

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 established this interpretation, "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 1776/1. 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)).

EPA's determination that TMDLs may be expressed in terms of time periods other than a 24-hour day is fully consistent with the Clean Water Act. Pursuant to Section 303(d), a TMDL must

be established at a level "necessary to implement the applicable water quality standards." 33 U.S.C. § 1313(d)(1)(C). 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. A 24-hour measure is not necessarily appropriate for all waterbodies or for all pollutants and, as discussed further below in Section I.C., this was the case here. 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 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.

In Natural Resources Defense Council v. Muszynski, 268 F.3d 91 (2d Cir. 2001), the Second Circuit rejected the precise argument presented by Plaintiff and found that TMDLs could be expressed in terms of time periods other than a 24-hour day. Specifically, the Muszynski court rejected the view that this issue was controlled by the inclusion of the word "daily" in the term "total maximum daily load" and found that EPA could express TMDLs in terms that were longer or shorter than a 24-hour day where an alternative time period served the purpose of effective regulation:

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.

Plaintiff cites two cases for the proposition that a Chevron Step I analysis precludes EPA from approving or establishing TMDLs based on time periods other than a 24-hour day. Plaintiff's Br. at 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 challenges grounded on the absence of TMDLs. 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). Accordingly, neither of these opinions contains any holding relevant to Plaintiff's contention that a Chevron Step I analysis restricts EPA to TMDLs based on 24-hour periods.

Thus, even if this issue had not been waived by Plaintiff's failure to challenge EPA's interpretation in the 1985 rulemaking, EPA has reasonably interpreted the Clean Water Act as affording the Agency the legal authority to approve and/or establish TMDLs that are expressed in terms of time periods other than 24-hour days, and this Court should not conclude otherwise.

C. The Annual And Seasonal TMDLs At Issue Here Are Protective Of The Applicable Water Quality Standards And Should Be Upheld.

As Plaintiff agrees, once the Court determines that TMDLs expressed in time periods other than a 24-hour day are within the legal authority of EPA, the question becomes whether the TMDLs here satisfy the statutory requirement "to implement the applicable water quality standards." 33 U.S.C. § 1313(d)(1)(C). Plaintiff's Br. at 18-19. Plaintiff contends that the annual and seasonal TMDLs here are unlawful and arbitrary because they allow continued violations of water quality standards. Plaintiff's Br. at 18-25. In fact, the TMDLs at issue here assure that water quality standards are met and, thus should be upheld.

1. The BOD TMDL Approved By EPA Is Protective Of The Applicable Water Quality Standard.

The BOD TMDL applies to pollutants that affect the oxygen content of the Anacostia River. Healthy waters contain dissolved oxygen upon which organisms rely, but certain pollutants "demand" and consume this 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 micro-organisms as they decompose organic matter, or by other types of bacteria through respiration, when they feed on nutrients, through respiration and when they die and other organisms use oxygen to decompose them.

The District concluded, and EPA agreed, that expressing the BOD TMDL in terms of an annual average rather than a daily load was a reasonable way of assuring achievement of the applicable water quality standard, in this instance dissolved oxygen.^{4/} BOD Decision Rationale (BOD-1), at 20-22 (JA 633-35); BOD TMDL Report (BOD-20), at 1-2 (JA 384-85). The District determined that, in the Anacostia River, dissolved oxygen levels decline after large rainfalls as a result of BOD loadings that have accumulated in the river bottom over time as well as from the BOD discharges entering the Anacostia River with storm discharges from the on-going rainfall. BOD TMDL Report (BOD-20), at 9 (JA 392). This occurs because bottom sediment in the river accumulates BOD pollutants over time. Then, during storm events, increased flows into the river cause the accumulated BOD on the river bottom to be resuspended and mixed with new BOD loadings in storm water discharges. BOD TMDL Report (BOD-20), at 9 (JA 392). In this way, the previously deposited BOD pollutants, along with the newly discharged BOD pollutants, become available for the biological and chemical reactions that reduce oxygen in the water. As the District observed, "there is a memory in the sediment of BOD loads from two to three years in the past." BOD TMDL Report (BOD-20), at 9 (JA 392). Because the BOD retention time in sediment is measured in years, the District concluded that it was reasonable

^{4/} The District listed the Anacostia River on the 1998 section 303(d) list because of exceedances of 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 "DC TMDL 26") (JA 49). The dissolved oxygen criterion is expressed as both a daily average and a one-hour minimum. BOD Decision Rationale (BOD-1), at 20 (JA 663); District of Columbia Register, January 21, 2000 (BOD-60), at 291 (JA 58). 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 (JA 633); BOD TMDL Report (BOD-1), at 2 (JA 385); District of Columbia Register, January 21, 2000 (BOD-60), at 291 (JA 58).

to measure loadings reductions in years as well. BOD TMDL Report (BOD-20), at 9 (JA 392).

In other words, by reducing the total annual load of BOD that is discharged to the Anacostia River, the TMDL would reduce the total load of BOD that is accumulated in the sediment over time. Then, by reducing the amount of BOD accumulated in the sediment, the TMDL will assure that a storm event will resuspend less BOD. With less resuspended BOD from the sediment, coupled with the reduced BOD loads in any current storm water discharges, the dissolved oxygen standard will be achieved and maintained. BOD TMDL Report (BOD-20), at 9-10 (JA 392-93). For these reasons, it was reasonable for EPA to approve the BOD TMDL stated in terms of an annual load.

Plaintiff suggests that an annual load is not an appropriate measure for the BOD TMDL because the water quality standard applicable to BOD is stated as a daily and hourly standard, not as an annual standard. Plaintiff's Br. at 19. As an initial point, Plaintiff's logic would preclude even the use of the daily TMDL advocated by Plaintiff. Just as an annual TMDL might appear to be inconsistent with a daily standard, so would a daily TMDL appear inconsistent with the hourly standard. Judging a TMDL on this superficial basis, however, is not appropriate; the statutory test is whether the load "is established at a level necessary to implement the applicable water quality standard." 33 U.S.C. § 1313(d)(1)(C). Thus, Plaintiff's argument against an annual TMDL must be judged on the record, not on the mere fact that a year is not the same as a day.

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. In establishing 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.^{5/}

First, 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 208).^{6/} From this calibration and verification, the District and EPA concluded that the model accurately predicted how a given percentage reduction in pollutant loads would affect dissolved oxygen levels on a daily basis. Plaintiff has not and cannot demonstrate that the choice of this model was unreasonable. National Wildlife Fed'n v. EPA, 286 F.3d at 565 ("We may

^{5/} A water quality model is used to provide an accurate picture of how the discharge of a pollutant impacts water quality over time and factoring in the many variables as they interact. For example, the variables addressed in the BOD model include water flow velocity, water depth, transport of pollutants, sediment oxygen demand, sediment movement and resuspension, sediment buildup and various chemical and biological processes. A good water quality model is particularly important for complex water systems like the Anacostia River.

^{6/} 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 166). 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. From this process and based on the information in the record, the District and EPA concluded that the model reasonably simulates how discharges of these pollutants effect water quality in the Anacostia River. See TAM/WASP Model (BOD-48), at 121-124 (JA 263-266). A full discussion of this calibration and verification process is provided in TAM/WASP Model (BOD-48), at 66-120 (JA 208-262).

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).

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 (JA 390-92, 403-36); BOD Decision Rationale (BOD-1), at 20 (JA 633). The District ultimately selected the "Scenario 11" load reductions (reducing storm water and Maryland BOD loads by 50%, reducing these sources' nutrient loads by 30% and reducing the loads from combined sewer outfalls of both BOD and nutrients by 90%), plus an additional loading reduction of 17,224 pounds of BOD from Maryland. BOD TMDL Report (BOD 20), at 10-13 (JA 393-96). 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 Decision Rationale (BOD-1), at 20-21, 26 (JA 633-34, 639). The District further reduced the 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 (JA 396); BOD Decision Rationale (BOD-1), at 27 (JA 640).^{2/}

^{2/} Plaintiff asserts that the draft Long Term Control Plan prepared by the District of Columbia Water and Sewer Authority ("WASA") suggests 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. Plaintiff's Br. at 21-22. In making this argument, Plaintiff 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

(continued...)

In short, the District and EPA acted reasonably in employing an annual average measure for the TMDL and in concluding that the reductions required under this TMDL would assure attainment of the daily dissolved oxygen standards. EPA's decision to approve the expression of this BOD TMDL as an annual average reflects a scientific judgment within an area of the Agency's expertise and is entitled to particular deference. National Wildlife Fed'n, 286 F.3d at 560. It should be upheld.

2. **The TSS TMDL Established By EPA Is Protective Of The TSS 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.

The primary water quality standard for the TSS TMDL is the narrative water quality criteria to protect the aquatic life use in the Anacostia River. TSS Decision Rationale (TSS-1), at 4-6 (JA 666-

^{2/}(...continued)

TMDL provides for 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 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 (JA 519) (Table 9-6, note 1); BOD Decision Rationale (BOD-1), at 20, 27 (JA 633, 640).

Further, EPA agrees that the BOD TMDL recognizes that there will be some overflow events (as stated in Plaintiff's Br. at 21), 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 633) (noting that TMDL -- which assumes reductions from other sources -- will achieve water quality standards when BOD loadings from combined sewer overflows are reduced by 90% but not entirely eliminated).

68), TSS TMDL Report (TSS-1), at 6 (JA 685); TSS Response to Comment # 1 (TSS-2), at 1 (JA 743). To protect aquatic life, 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 (JA 685); TSS Response to Comment #1 (TSS-2) (JA 743). 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 (JA 687-89); TSS Response to Comment # 20 (TSS-2), at 4 (JA 746); Chesapeake Bay Submerged Aquatic Vegetation Water Quality and Habitat-Based Requirements and Restoration Targets ("Chesapeake SAV Report") (TSS-55), at iv, 4 (JA 88, 101).

While submerged aquatic vegetation provides essential food and habitat for aquatic organisms every day throughout the year, EPA concluded, based on Chesapeake Bay research, 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 (JA 715); Chesapeake SAV Report (TSS-55), at iv, 97 (JA 88, 107). 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 705). To put it another way, if TSS loads are adequately controlled during the April 1 to October 31 growing season, such that 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 (JA 705, 715); TSS Response to Comments ## 2, 12, and 20 (TSS-2), at 1, 3 and 4 (JA 743, 745, 746); Chesapeake SAV Report (TSS-55), at iv, 97 (JA 88, 107).

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 (JA 697-705); Calibration of the TAM/WASP Sediment Transport Model (TSS-51) (JA 530-600). 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 699-701, 706), 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 711-13). 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 (JA 712, 715, 717); TSS Decision Rationale (TSS-1), at 8, 9 (JA 670, 671). 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 (JA 687-89, 715); TSS Decision Rationale (TSS-1), at 1, 5-6, 8 (JA 663, 667-8, 670).

For these reasons, EPA's decision to employ a median seasonal concentration in the TSS TMDL should be upheld.

II. EPA's TSS TMDL Properly Focused On The Anacostia River's Ability To Support Aquatic Life And Is Protective Of Recreational and Aesthetic Uses.

Plaintiff 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. In particular, Plaintiff contends that EPA cannot reasonably conclude that a TSS load that protects aquatic life (that is, fish, shellfish and wildlife, as well as the aquatic vegetation that forms the base of their food chain) will also protect the Anacostia River for recreational and aesthetic uses. Plaintiff's Br. at 26-32. Contrary to Plaintiff's contention, EPA's approach was reasonable.

In 1998, the District identified the Anacostia River as an impaired waterbody because it was not "free from" turbidity, as the District's narrative water quality criteria required (see EPA's 1998 Listing Approval Decision (TSS 68), at 5 (JA 45) (page also identified at "DC TMDL 7") ("Turbidity is discussed in the narrative of the [water quality standard] as one of the conditions from which the surface waters of the District shall be free")), and named TSS as the main cause. Fact Sheet Attached to 1998 List Submission (TSS-68), at 2 (page also identified as "DC TMDL 26") (JA 49). EPA approved the listing decision on that basis. EPA's 1998 Listing Approval Decision (TSS-68), at 5 (page also marked as "DC TMDL 7") (JA 45); see also TSS TMDL Report (TSS-1), at 5-7 (JA 684-86).

In the course of developing the TSS TMDL, EPA expressed the District's narrative criterion in the form of a numerical target or "endpoint" for the TSS reductions. TSS TMDL Report (TSS-1), at 8, 9 (JA 687, 688). As discussed above (in Section I.C.2), EPA examined data for the Chesapeake Bay watershed and concluded that a numerical endpoint of a seasonal median of "less than 15 mg/l"

would protect the aquatic community. EPA therefore established the TSS TMDL specifically to protect fish, shellfish and wildlife by setting TSS loads that would assure water clarity sufficient for the growth of the aquatic vegetation. TSS TMDL Report (TSS-1), at 6, 7 (JA 685, 686).

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 668-69). For several reasons, however, EPA decided not to try to develop an additional, specially tailored, numerical endpoint to protect that use. First, as noted above, EPA had identified an objective numerical endpoint for an objective environmental problem – the loss of submerged aquatic vegetation – based on the considerable scientific analysis in the Chesapeake Bay context. TSS TMDL Report (TSS-1), at 6-7 (JA 685-86). The protection of the beauty and aesthetic quality of water, by comparison, is subjective and not readily amenable to a numeric endpoint. TSS TMDL Report (TSS-1), at 6-7 (JA 685-86); EPA Water Quality Guidance “Gold Book” Excerpts (TSS-48), at 4 (JA 4). Second, EPA 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 (JA 686); TSS Response to Comment ## 1, 2, 19 (TSS-2), at 1, 4 (JA 743, 746); EPA Gold Book Excerpts (TSS-48), at 4 (JA 4). 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. TSS TMDL Report (TSS-1), at 7 (JA 686).

EPA agrees with Plaintiff that it would be possible, through surveys and intensive data gathering, to develop a numerical endpoint for the protection of recreational uses. Plaintiff’s Br.

at 29-30. Further, and contrary to Plaintiff's suggestion (at Plaintiff's Br. at 31), EPA does not contend that broad narrative criteria "cannot" be implemented. 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 undisputed environmental problem. Beyond its unsupported assertions that the "less than 15 mg/l" endpoint is not enough, Plaintiff has not shown EPA's conclusion to be unreasonable. While EPA could have invested time and resources as Plaintiff suggests to derive a recreational use endpoint (which may or may not have been more stringent than the aquatic life endpoint), EPA reasonably concluded that this was not necessary.

Plaintiff's reliance on U.S. Air Tour Ass'n v. FAA, 298 F.3d 997, 1017 (D.C. Cir. 2002), is misplaced. See Plaintiff's Br. at 28. 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 Plaintiff describes frequent, repeated use of the Anacostia River year round, not just visits for a couple of days during certain seasons.^{8/} Thus, though turbid water

^{8/} See Declaration of James Connelly, at ¶¶ 2-3, 6 (SJA 17-19) (Mr. Connelly and teammates row 5 days per week from March to November, and some scullers row almost every day of the year. Members of a paddling group canoe "at least four times per week in the spring, summer and fall."); Declaration of Damon Whitehead, at ¶¶ 2-3 (SJA 26) (Mr. Whitehead views the river numerous times each day, and boats on the river on a daily basis during the summer, about 3 times per week during the (continued...))

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 protected.

For all these reasons, EPA's TSS TMDL should be upheld.

III. Contrary to Plaintiff's Contention, These TMDLs Establish Loads For Nitrogen and Phosphorus.

Plaintiff argues that the TMDLs approved and established by EPA contain no TMDLs for nutrients such as phosphorus and nitrogen, and thus allow continued violations of water quality standards. Plaintiff's Br. at 32-35. The factual premise for Plaintiff's argument on this point is incorrect.

First, contrary to Plaintiff's assertion, the BOD TMDL contained, and EPA approved, loads for the nutrients phosphorus and nitrogen. Like BOD, phosphorus and nitrogen can reduce the amount of dissolved oxygen in the river, which in turn adversely affects aquatic life. BOD Decision Rationale (BOD-1), at 19 (JA 632). As a necessary component of the District's calculations to assure that the TMDL achieves and maintains the daily average dissolved oxygen criterion, the District not only included load reductions for BOD, but also allocated load reductions to nitrogen and phosphorus. BOD Decision Rationale (BOD-1), at 22-23, Table 12 (JA 635-36) (stating allocated loads for BOD, Nitrogen and Phosphorus); BOD TMDL Report (BOD-20), at 11, 13 (JA 394, 396). On this basis, EPA approved the BOD TMDL and its specific allocations. BOD Decision Rationale (BOD-1), at 1-

^{8/}(...continued)

other months from March to November, and less frequently during the rest of the year.); Declaration of Duncan Spencer, at ¶1 (attached to Plaintiff's Exhibits in Support of Its Motion for Summary Judgment) (Mr. Spencer rows on the Anacostia River "nearly every day on which the River is not frozen").

2 (chart showing "TMDL summary" includes loads for BOD, nitrogen and phosphorus) and 20 (noting that the TMDL scenario chosen by the District, which includes reductions in BOD and nutrient loads, plus additional BOD removals from Maryland, was sufficient to achieve water quality standards) (JA 614-15, 633). This action by EPA, in turn, has regulatory significance: once approved, the wasteload allocations for BOD, nitrogen and phosphorus become the basis for NPDES permit limits. See 40 C.F.R. § 122.44(d)(1)(vii)(B) (requiring the permitting authority to ensure that water quality-based effluent limitations are consistent with "the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA pursuant to 40 C.F.R. 130.7."). In short, the absence of the term "nutrients" from the TMDL title has no legal significance. For these reasons, Plaintiff's argument that the BOD TMDL fails to address nutrients should be rejected.^{2/}

Second, with respect to the TSS TMDL, EPA concluded that specific allocations for nitrogen and phosphorus did not need to be included in the TSS TMDL because TSS was the main cause of

^{2/} EPA recognizes that the District's BOD TMDL in one place described the nutrient allocations as "projected reductions," BOD TMDL Report (BOD-20), at 11 (JA 394), and stated that they were not formally part of the TMDL because the Anacostia had not been listed for nutrients, BOD TMDL Report (BOD-20), at 13 (JA 396). Elsewhere, however, the TMDL recognizes that the nutrient load reductions are a necessary component of the reductions needed to achieve the average daily dissolved oxygen level of 5.0 mg/l as stated in the water quality standards, BOD TMDL Report (BOD-20), at 10 (JA 393), and, indeed, the TMDL assumes that the nutrient reductions will actually occur. BOD TMDL Report (BOD-20), at 14 (JA 397) (noting that controls needed to achieve the nutrient reductions will concomitantly achieve at least a 50% reduction of the BOD loads). EPA ultimately approved the BOD TMDL because the sum of its BOD and nutrients loads would achieve applicable water quality standards. BOD Decision Rationale (BOD-1), at 1, 10, 19-21 (JA 614, 623, 632-34) (noting that the TMDL scenario chosen by the District, which includes reductions in BOD and nutrient loads, plus additional BOD removals, was sufficient to achieve water quality standards). Thus, to the extent there was any ambiguity in the TMDL, it was cured by EPA's approval decision.

turbidity in the Anacostia River and because any impact on turbidity that may be caused by nutrients would be adequately reduced through implementation of the nitrogen and phosphorus loads stated in the BOD TMDL. TSS TMDL Report (TSS-1), at 10 (JA 689); TSS Response to Comment # 17 (TSS-2), at 3 (JA 745). Plaintiff's objection to the TSS TMDL is premised on flaws it perceives in the BOD TMDL. Plaintiff's Br. at 34. As shown above, however, the BOD TMDL in fact allocates loads to nutrients; therefore, all of Plaintiff's arguments on this point are based on an inaccurate premise (see Plaintiff's Br. at 34-35), and thus fail to demonstrate error.

IV. EPA's Decision To Establish Or Approve TMDLs With Wasteload Allocations Expressed In The Form Of A Specific Percent Reduction For Each Category Of Sources Was Reasonable.

Plaintiff incorrectly argues that the TMDLs are unlawful and arbitrary because they fail to establish waste load allocations for individual sources. Plaintiff's Br. at 35-37. In fact, the TMDLs at issue here contain such individual wasteload allocations.

First, the TSS TMDL identifies the segment by segment allowable loads and individual wasteload allocations for each regulated point source. TSS TMDL Report (TSS-1), at 35, Table 8-1 (JA 714). Similarly, the BOD TMDL identifies the segment by segment allowable load and individual wasteload allocations. BOD Decision Rationale (BOD-1), at 22-23, Table 12 (JA 635-36).

Second, and moreover, both the BOD and TSS TMDLs express their wasteload allocations in the form of a percent reduction from calculated current loads. BOD TMDL Report (BOD-20), at 5, 12 (JA 388, 395); TSS TMDL Report (TSS-1), at 27, 29, 32-33, Appendix C (JA 706, 708, 711-12, 732-42). The TSS TMDL calls for 77% reduction from all sources and source categories. TSS Decision Rationale (TSS-1), at 7 (JA 669); TSS TMDL Report (TSS-1), at 32, 33, 36 (JA 711,

712, 715). The BOD TMDL calls for different percentage reductions from different source categories, as follows: 90% BOD reductions from combined sewer overflow sources and, from storm water sources, 50% reduction in BOD and 30% for nutrients (not including the margin of safety).

BOD TMDL Report (BOD-20), at 9, 11-12 (JA 392, 394-95).^{10/} Each individual source within these source categories is subject to the specified percent reduction for that source category. As EPA explained in the context of BOD, “As the source of all storm water loads [is] the same, i.e., wash off from land surfaces, it is appropriate to require the same percent reduction for BOD, nitrogen, and phosphorus loads.” BOD Decision Rationale (BOD-1), at 22 (JA 635); see TSS TMDL Report (TSS-1), at 35 (JA 714) (noting reductions to “all sources”), 36 (JA 715) (noting that if “all source concentrations” achieve the 77% reduction, then EPA expects the water quality standard for TSS to be achieved). Moreover, the TSS TMDL includes a table (similarly applicable to the BOD TMDL) that identifies the precise location of 35 combined sewer overflow sources or storm water outfall points by segment and even stream bank orientation. TSS TMDL Report (TSS-1), Appendix B (JA 728-31).

In order to translate the percent reduction allocations to source-specific pounds, one would only need to (a) determine the source’s current discharge level, (b) determine what category that source is in (e.g., combined sewer overflow or storm water), (c) look up the percentage reduction for that category, and (d) do the math. The absence of this last ministerial step in the BOD and TSS TMDLs thus has no practical significance.

^{10/} A percent reduction applied to each source is a reasonable way to express an individual waste load allocation under the circumstances we have here, where the data for individual NPDES-regulated sources is co-mingled with data for non-regulated storm water sources. TSS TMDL Report (TSS-1), at 32 (JA 711); BOD Decision Rationale (BOD-1), at 22 (JA 635).

EPA also considered the permitting implications of expressing wasteload allocations as a percent reduction per source: "For wet weather permitting purposes, an adequate measure of the allocated load would be to monitor individual pipes for flow and concentration to determine the event mean concentration to document conformance to this TMDL." BOD Decision Rationale (BOD-1), at 24 (emphasis added) (JA 637). Similarly, EPA said in the TSS TMDL: "Any DC NPDES permit reissued to discharge into the District's portion of the Anacostia River must be consistent with the [waste load allocations] set forth in this TMDL (expressed as percent reductions from 'existing' loads)."

TSS TMDL Report (TSS-1), at 43 (emphasis added) (JA 722). In other words, neither TMDL deferred allocation issues to the permitting stage, as Plaintiff asserts. Plaintiff's Br. at 36-37.

For the foregoing reasons, EPA's decision to establish or approve TMDLs with wasteload allocations expressed in the form of a specific percent reduction applicable to each source within each category was reasonable and should be upheld.^{11/}

^{11/} Although the Court need not reach this issue, Plaintiff also incorrectly contends that EPA, as a matter of law, may not allocate waste loads to categories of sources, but must allocate loads to each individual point source. Plaintiff's Br. at 35-36. The regulatory language relied upon by Plaintiff for this point states that a TMDL is "[t]he sum of the individual [waste load allocations] for point sources and [load allocations] for nonpoint sources and natural background." Plaintiff's Br. at 35 (quoting 40 C.F.R. § 130.2(i)). As previous courts have recognized, this regulation provides that EPA must set TMDLs based on the total discharges from all sources, but does not require the Agency to allocate a specific part of the total load to each individual point source. Dioxin/Organochlorine Center v. Rasmussen, No. C93-330, 1993 WL 484888, *5 (W.D. Wash. Aug. 10, 1993) ("While a TMDL should consider all discharges of a pollutant, nothing in the relevant statute or regulations explicitly requires that a TMDL set waste load allocations for all point sources or load allocations for all nonpoint sources.").

Moreover, while a single "pipe" or other discrete conveyance may under certain circumstances constitute a relevant point source for regulatory purposes, in the municipal storm water context EPA

(continued...)

V. Contrary To Plaintiff's Contention, EPA Did Consider The Continuing Impacts Of The BOD Pollutants That Flow Into And Through The District From Maryland.

Plaintiff argues that EPA unlawfully and arbitrarily approved the District's BOD TMDL because that TMDL underestimates the impact of upstream waters. Plaintiff's Br. at 38-39. Specifically, Plaintiff contends that EPA only considered the dissolved oxygen conditions at the District-Maryland border, and failed to consider that the BOD pollutants will flow downstream into the District and continue to impact dissolved oxygen levels there. Plaintiff's Br. at 38-39. Plaintiff's argument here fails because it is factually incorrect. EPA did consider the continuing impacts of the BOD pollutants as they flow into and through the District.

As discussed above in Section I.C, the District used an appropriately calibrated and verified computer model to simulate the physical, chemical, and biological processes in the Anacostia River that are believed to have the most significant impact on dissolved oxygen levels. BOD Decision Rationale (BOD-1), at 9 (JA 622). In addition, the District used models and other methods to simulate daily flow

^{11/}(...continued)

has interpreted the Clean Water Act to allow systemwide, rather than individual outfall, treatment of municipal storm water discharges in TMDLs and NPDES permits. See 33 U.S.C. 402(p)(3)(B)(i) ("[p]ermits for discharges from municipal storm sewers . . . may be issued on a system- or jurisdiction-wide basis."); 40 C.F.R. 122.26(d)(2)(iv) (proposed management programs submitted as part of a municipal storm water permit application "may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls."); 40 C.F.R. 122.26(d)(1)(iv)(B); 122.26(d)(1)(iv)(D); 122.26(d)(1)(iv)(E); 122.26(d)(2)(iii); 55 Fed. Reg. 47990, 48046 (November 16, 1990) (the Phase I storm water rules "will not require submittal of individual permit applications with quantitative data for each outfall of a municipal system."); Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs (November 22, 2002) at 1 (EPA TMDL guidance says "[i]t may be reasonable to express allocations for NPDES-regulated storm water discharges from multiple point sources as a single categorical wasteload allocation when data and information are insufficient to assign each source or outfall individual WLAs.")

volume and loadings into the Anacostia from a variety of sources. BOD Decision Rationale (BOD-1), at 9 (JA 622). Because the majority of the Anacostia River watershed lies in Maryland, see BOD Decision Rationale (BOD-1), at 19 (JA 632), the models specifically accounted for flows and pollutant loadings originating in Maryland as part of the Anacostia River's baseline, see, e.g., BOD Decision Rationale (BOD-1), at 13-14 (JA 626-27) (counting as Maryland's storm water contribution 100% of the flow of Lower Beaverdam Creek and 53% of the flow from Watts Branch); BOD TMDL Report (BOD-20), at 6 (JA 389) (same); TAM/WASP Model (BOD-48), at 36 (JA 178) (noting additional calculations made for direct drainage to the tidal Anacostia in Maryland). Considering all of the loads entering the Anacostia River from Maryland and District sources, the District then used its model to estimate the effect on water quality if the loadings were reduced under 13 different scenarios. BOD TMDL Report (BOD-20), at 7-9 (JA 390-92). Each scenario assumed a different mix of loading reductions from both Maryland and District sources. BOD TMDL Report (BOD-20), at 7-9 (JA 390-92). The District ultimately concluded, and EPA agreed, that water quality standards for dissolved oxygen would be achieved with a reasonable margin of safety in the various segments of the Anacostia River downstream of the Maryland/District border if, in addition to D.C. reductions, storm water loadings from Maryland were reduced by 50% (plus an additional 17,224 pound reduction to account for large storms). BOD TMDL Report (BOD-20), at 10-11 (JA 393-94); BOD Decision Rationale (BOD-1), at 20-21 (JA 633-34) (recognizing certain uncertainties, but concluding that the specified reductions -- including the percentage reductions for each category, the additional 17,244 pound reduction and the margin of safety -- "adequately achieves and maintains applicable water quality standards").

The District's TMDL analysis concluded, and EPA agreed, that these Maryland reductions would result in attainment of the District's dissolved oxygen standard in the Anacostia River at the Maryland/D.C. border. BOD Decision Rationale (BOD-1), at 20-21 (JA 633-34). Plaintiff does not dispute this. Rather, Plaintiff makes an unsupported assertion that Maryland's loads under the TMDL would prevent attainment of the District's dissolved oxygen standard farther downstream in the D.C. portion of the Anacostia River. Plaintiff's Br. at 38. Plaintiff has not carried its burden to make this case. Without citing to the data, models or analyses in the record, Plaintiff simply claims this result. Plaintiff's Br. at 38 (citing to its own unsupported comments made by Plaintiff's consultant in Smith Memorandum, dated April 17, 2001 (BOD-62), at 2-3 (JA 379-380)). While EPA recognizes that upstream BOD loadings can have downstream effects, EPA disagrees with Plaintiff's contention that the final TMDL submitted by the District and approved by EPA will cause nonattainment of the water quality standard.

Plaintiff's prediction was based on its examination of a March 2001 draft of the TMDL. Smith Memorandum, dated April 17, 2001 (BOD-62), at 2-3 (JA 379-80). The March 2001 draft TMDL called for a 50% reduction of Maryland loadings. March 2001 Draft BOD TMDL (BOD-64), at 10 (JA 370). The final TMDL approved by EPA, in contrast, called for a 50% reduction of Maryland loadings plus an additional 17,224 pounds of BOD removed from Maryland sources. BOD TMDL Report (BOD-20), at 11 (JA 394). The District explained that this additional 17,224 pound reduction was designed, in the first instance, to mitigate the effects of large storms, BOD TMDL Report (BOD-20), at 11 (JA 394), but the District also asserted in response to comments that it had "adjusted the TMDL in order to meet [water quality standards]," District's BOD Response to Comment # 1

(BOD-20), at 1 (JA 480). In its approval decision, EPA acknowledged this change. BOD Decision Rationale (BOD-1), at 21 (JA 634). While EPA said that it could not predict downstream effects of the newly reduced load, EPA also specifically found that the additional reductions would “significantly reduce the number of [downstream] low dissolved oxygen events.” BOD Decision Rationale (BOD-1), at 21 (JA 634). Plaintiff, by contrast, has not raised any specific rationale or calculations demonstrating why the additional load reduction will not adequately address the downstream impacts. Ultimately, taking into account these additional reductions, the TMDL’s margin of safety to account for uncertainties, and the District’s commitment to reevaluate the TMDL and revise it if necessary, EPA concluded that “this TMDL adequately achieves and maintains applicable water quality standards.” BOD Decision Rationale (BOD-1), at 21 (JA 634). Under all the circumstances, this decision was reasonable and should be upheld.

CONCLUSION

For these reasons, the Court should grant summary judgment for EPA and against Plaintiff.

Respectfully submitted,

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Dated: June 17, 2004

FRIENDS OF THE EARTH

Case No. 04-92 (RMU)

Judge Ricardo M. Urbina

Defendants.

Defendants United States Environmental Protection Agency and Michael O. Leavitt,

EPA agrees with Plaintiff that this case presents only issues of law, and that there are no issues

of fact to be decided by this Court. American Bioscience v. Thompson, 269 F.3d 1077, 1083 (D.C.

Cir. 2001) (“As we have repeatedly recognized, . . . when a party seeks review of agency action under the APA, the district judge sits as an appellate tribunal. The ‘entire case’ on review is a question of

law.”); Marshall County Health Care Authority v. Shalala, 988 F.2d 1221, 1225-26 (D.C. Cir. 1993)

(When a district court reviews agency action, “[t]he entire case on review is a question of law, and only

a question of law [The] complaint, properly read, actually presents no factual allegations, but rather only arguments about the legal conclusion to be drawn about the agency action.”). Thus, there are no material facts in this case.

Further, EPA acknowledges the Court’s concern that the absence of a separate listing of facts by the Parties might require the Court to sort through a large administrative record, and particularly notes the Court’s June 15, 2004 Order, which points out the importance of the Parties’ regularly citing to the Joint Appendix to ensure that the Court can identify the parts of the record on which the Parties rely. EPA has endeavored to provide such citations in its papers.

Finally, if the Court determines that the Parties’s papers prove inadequate for the Court’s purposes, EPA certainly will comply with the directions of the Court to remedy that.

Respectfully submitted,

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FRIENDS OF THE EARTH

V.

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) Judge Ricardo M. Urbina
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This matter coming before the Court on the parties' cross-motions for summary judgment, and having considered the arguments of the parties, it is

ORDERED that the Environmental Protection Agency's Motion for Summary Judgment is granted, and it is further

ORDERED that Plaintiff's Motion for Summary Judgment is denied, and

THEREFORE, judgment is entered for Defendants Environmental Protection Agency and Michael O. Leavitt, Administrator, and against Plaintiff Friends of the Earth.

SO ORDERED.

United States District Judge

Dated: _____

CERTIFICATE OF SERVICE

I, Scott J. Jordan, hereby certify that on June 17, 2004, I caused to be served a true and accurate copy of (1) EPA's COMBINED MOTION FOR SUMMARY JUDGMENT AND OPPOSITION TO PLAINTIFF'S MOTION FOR SUMMARY JUDGMENT, AND INCORPORATED MEMORANDUM OF LAW, (2) EPA'S STATEMENT OF MATERIAL FACTS, AND (3) EPA'S PROPOSED ORDER GRANTING SUMMARY JUDGMENT by electronic transmission and regular mail upon:

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