IN RE CITY OF ATTLEBORO, MA WASTEWATER TREATMENT PLANT

NPDES Appeal No. 08-08

ORDER DENYING REVIEW

Decided September 15, 2009

Syllabus

Petitioner, the City of Attleboro, Massachusetts ("City"), seeks review of certain aspects of a National Pollutant Discharge Elimination System ("NPDES") permit decision ("Permit") issued to it by the U.S. Environmental Protection Agency ("EPA") Region 1 ("Region") and the Massachusetts Department of Environmental Protection ("MassDEP"). The Permit regulates discharges from the Attleboro Water Pollution Control Facility ("Attleboro" or "Facility") into the Ten Mile River in Massachusetts, about 200 yards from the Massachusetts/Rhode Island border. The City filed a petition requesting that the Environmental Appeals Board ("Board") review the Permit's nitrogen, phosphorus, and metal effluent limits, and various alleged procedural deficiencies.

Held: Upon consideration of the arguments, the Board denies review of the Permit in all respects. The Board's holdings with respect to the main arguments the City raised are summarized below.

(1) *Nitrogen Limit*: The Permit limits total nitrogen in Attleboro's discharges between the months of May through October inclusive to 8 mg/l. In establishing the nitrogen limit, the Region relied, among other things, on the results of a physical water quality model, the MERL model. The City takes issue with the approach the Region adopted, arguing that the Region based the limit on unreliable science and data. The City questions the applicability and reliability of the MERL model, asserting that the Region should have used an existing mathematical model or developed a site-specific model instead of using the physical model. The City also identifies alleged errors in some of the assumptions the Region made, and questions the equity of the limit relative to the limits imposed by Rhode Island on its own dischargers. The Board declines review of the nitrogen limit on these bases.

- The Board rejects the City's suggestion that the Region impermissibly exercised its discretion by relying on a physical model. In making this judgment, the Region considered the technical difficulties in developing a mathematical model, and that the model Attleboro referred to was not designed to model nitrogen or other nutrient impacts. While the Region acknowledged that there were limitations in using the MERL model, scientific uncertainty provided no basis for refraining to exercise its judgment so long as the model bears a rational relationship to the reality it purports to represent.

- The Board rejects the suggestion that the MERL model bears no relationship to the specifics of the Facility and affected waters. The record shows that the MERL model studied the impact of nutrient loading in Rhode Island waters. In applying the model, the Region considered the limitations and uncertainties associated with its use and the connection between the model and the natural environment of the Facility. The Board finds no clear error in the Region's exercise of its technical judgment to translate the results of the model into water quality-based effluent limits for the Facility.

- The Board rejects the City's arguments that the Region erred by focusing on the Providence and Seekonk River system or any implication that the Region's analysis should have focused solely on the Seekonk River. In any event, the Board concludes that, contrary to the City's assertions, the Region did address the City's comments about the flushing rate in the Seekonk River, and the City never addressed the Region's response in this regard.

- The Board is not persuaded that the Facility has been assigned a more stringent limit than the facilities in Rhode Island. Initially, the Board notes that a disparity in permit limits, without more, is not a matter warranting review. Only if a petitioner can establish that the circumstances for two facilities were essentially indistinguishable, which the City has failed to do here, would the permitting authority need to show a supportable basis for the disparity. Further, the Board concludes that the City incorrectly assumes that the Region is required to consider attenuation in setting permit effluent limits. (Attenuation refers to the loss of nitrogen between the point of discharge and the point of impact caused by biological uptake.) Finally, the Board finds the City's attempt to show that Rhode Island facilities are allowed higher nitrogen contributions in Rhode Island waters is flawed, both in its choice of facilities to be compared to and in its calculation of the limits to be compared.

(2) *Phosphorus Limit*: The Permit limits total phosphorus in Attleboro's discharges to a monthly average of 0.1 mg/l from April through October. In establishing this limit, the Region considered applicable state narrative and numeric criteria, and various reference materials. The Region determined that the 0.1 mg/l limit is necessary to control the effects of cultural eutrophication and to ensure compliance with Massachusetts' and Rhode Island's water quality standards. The City challenges these determinations, claiming that the Region misread the Rhode Island standard for lakes, questioning the use of low flow conditions to determine the limit, and identifying alleged errors in some of the assumptions and technical determinations made in deriving the limit. The Board declines review of the phosphorus limit on these bases.

- The Board finds no clear error in the Region's use of Rhode Island's definition of a lake in determining whether the Turner Reservoir is a lake, rejecting the City's argument that the definition set forth in EPA guidance is controlling. The Board finds, instead, that the applicable definition is the one in the Rhode Island state water quality standards. Thus, the City's arguments that Turner Reservoir is not a lake based on mean water residence time are irrelevant since that is not a criterion under the state's definition.

- The Board rejects as a basis for review the City's contention that the Region erred in using low flow conditions (i.e., "7Q10" conditions) to determine the phosphorus limit. The Region's determination is consistent with Rhode Island and Massachusetts water quality standards, which require compliance during low flow conditions. The City failed to address the Region's response to comments or explain why the Region's interpretation of Rhode Island standards is erroneous.

- The Board finds no clear error in the Region's interpretation and application of EPA's *Gold Book* values in calculating the permit limitation.

- The Board finds the City's reliance on 40 C.F.R. § 122.44 for the proposition that the permit issuer has an obligation to impose lower effluent limits based on dilution and attenuation to be mistaken. The Board also finds no abuse of discretion in the Region's determination not to adjust the effluent limits for dilution and attenuation in this case.

(3) *Metal Limits*: The Permit limits the amount of aluminum, cadmium, lead, and other metals in the Facility's discharge. In establishing the aluminum limit, the Region followed the criteria established in an EPA guidance document. The City challenges the aluminum limit arguing that the Region failed to consider the applicability of certain aspects of the guidance document, and argues that the new limits for cadmium, lead, and other metals need not be as stringent. The Board denies review of these arguments on procedural grounds.

- The Board denies review of the aluminum limit since the issue raised in the petition was not preserved for Board review because it was not raised during the comment period on the draft permit.

- The Board denies review of the challenges regarding the permit limits for cadmium, lead, and other metals because the City simply reiterates comments made during the public comment period without substantively confronting the Region's response to those comments.

(4) *Alleged New Issues and Procedural Irregularities*: The City argues that the Region raised new issues for the first time in the response to comments that were not part of the fact sheets issued prior to the comment period, and on which the City had no opportunity to comment. The City also argues that the reopened comment period should have been for sixty days rather than thirty days, and suggests that it was prejudiced by the Region's denial of a hearing.

- The Board finds that the inclusion in the response to comments document of information not included in the fact sheets issued prior to the comment period did not deprive the City of meaningful notice and rejects the suggestion that the permitting authority must include in the fact sheet of a permit decision all of the information ultimately used in informing its final permit determinations. Further, the applicable regulations specifically contemplate addition of materials to the administrative record to address comments received during the comment period.

- The Board rejects as a basis for review the City's contention that the reopened comment period should have been longer, and the suggestion that the City was prejudiced by the Region's denial of a hearing. The City failed to substantively confront the Region's response to comments regarding these two issues, and its objections do not appear to be well-founded in any event.

Before Environmental Appeals Judges Edward E. Reich, Charles J. Sheehan, and Kathie A. Stein.

Opinion of the Board by Judge Reich:

I. *INTRODUCTION*

Petitioner, the City of Attleboro, Massachusetts ("City"), seeks review of certain aspects of a National Pollutant Discharge Elimination System ("NPDES")[1] permit decision ("Permit") issued to the City jointly by U.S. Environmental Protection Agency ("EPA" or "Agency") Region 1 ("Region") and the Massachusetts Department of Environmental Protection ("MassDEP").[2] The Permit regulates discharges from the Attleboro Water Pollution Control Facility ("Attleboro" or "Facility") into the Ten Mile River in Massachusetts. Dissatisfied with some of the Permit conditions, the City filed a petition on July 9, 2008, requesting that the Environmental Appeals Board ("Board") review the Permit's nitrogen, phosphorus, and metal effluent limits. The City also requested review of the absence of a compliance schedule to achieve these limits,[3] and of alleged procedural deficiencies.[4]

We begin our decision with a brief discussion of the factual and procedural background (Part II), the statutory and regulatory background (Part III), and the Board's standard of review (Part IV.A). We continue with a detailed discussion of the City's petition and our analysis (Part IV.B). For the reasons discussed below, we deny review of the Permit.

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[1] Under the Clean Water Act ("CWA" or "Act"), persons who discharge pollutants from point sources into waters of the United States must have a permit in order for the discharge to be lawful. CWA § 301, 33 U.S.C. § 1311. The National Pollutant Discharge Elimination System ("NPDES") program is one of the principal permitting programs under the CWA. *See* CWA § 402, 33 U.S.C. § 1342.

[2] Although EPA issues NPDES permits in Massachusetts, the state maintains permitting authority under Massachusetts law. *See* Mass. Gen. Laws ch. 21, § 43; Mass. Code Regs. tit. 314. When the Region issues an NPDES permit in Massachusetts, MassDEP jointly issues a permit under state law. Mass. Gen. Laws ch. 21, § 43; Mass. Code Regs. tit. 314; *see also In re City of Marlborough*, 12 E.A.D. 235, 236 n.3 (EAB 2005); *In re Westborough*, 10 E.A.D. 297, 300 n.2 (EAB 2002).

[3] The City initially challenged the absence of a compliance schedule in the Permit to achieve these effluent limits. However, at oral argument, the City withdrew this contention. *See* EAB Oral Arg. Tr. ("Tr.") at 24-25.

[4] Also dissatisfied with the Permit decision, the Rhode Island Department of Environmental Management ("RIDEM") filed a petition on July 10, 2008, seeking review of the Permit's limits on hardness-dependent metals. However, on January 6, 2009, RIDEM withdrew its petition with prejudice. *See In re City of Attleboro*, NPDES Appeal No. 08-09 (EAB Jan. 7, 2009) (Order Granting Request to Withdraw Petition for Review). Accordingly, this decision only addresses the City's petition for review.

II. *FACTUAL AND PROCEDURAL BACKGROUND*

A. *The Facility and Receiving Waters*

The Facility is an 8.6 million gallon per day advanced wastewater treatment facility ("WWTF")[5] located in the City of Attleboro, Massachusetts. *See* Respondent Region 1's Memorandum in Opposition to Petitions for Review Exhibit 2 ("Region's Resp. Ex. 2") at 1. The Facility discharges treated wastewaters into the Ten Mile River, about 200 yards from the Massachusetts/Rhode Island border. These discharges are governed by the Permit that is the subject of this appeal. *See* City of Attleboro Massachusetts Response to Comments ("RTC") at 6 n.5.

The Ten Mile River is an interstate freshwater river studded by several impoundments, including Central Pond and the James V. Turner Reservoir. Region's Resp. at 7; Region's Resp. Ex. 4 ("Receiving Water Map"). After crossing the Massachusetts/Rhode Island border at Pawtucket, Rhode Island, the Ten Mile River continues into East Providence, discharging into the Seekonk River, a marine water. *See* RTC at 6 n.5. The Seekonk River then joins the Providence River, also a marine water, ultimately flowing into Narragansett Bay. *See* Region's Resp. Ex. 2 ("Fact Sheet") at 5; Receiving Water Map. It is undisputed that the Facility discharges pollutants into waters of the United States.

The Ten Mile River is listed on the *Massachusetts Year 2004 Integrated List of Waters* as an impaired water body. Fact Sheet at 5. The segment of the Ten Mile River that runs north of the Facility to the Massachusetts/Rhode Island border is listed as impaired due to unknown toxicity, metals, nutrients, organic enrichment/low dissolved oxygen, pathogens, and noxious aquatic plants. *Id*. In addition, the free flowing segments of the Ten Mile River in Rhode Island are listed on *Rhode Island's 2004 CWA § 303(d) List of Impaired Waters* ("Rhode Island's List") as waters needing a total maximum daily load ("TMDL")[6] for copper, lead

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[5] This type of facility is also known as a publicly owned treatment works or POTW.

[6] Under section 303(d) of the Clean Water Act, states are required to identify those water segments where technology-based controls are insufficient to implement the applicable water quality standards, and which are therefore "water quality limited" or impaired. *See* CWA § 303(d)(1)(A), 33 U.S.C. § 1313(d)(1)(A); 40 C.F.R. § 130.2(j). Once a segment is identified as water quality limited, the state is further required to establish total maximum daily loads ("TMDLs"). CWA § 303(d)(1)(C), 33 U.S.C. § 1313(d)(1)(C); 40 C.F.R. § 130.7. A TMDL is a measure of the total amount of a pollutant from point sources, nonpoint sources, and natural background, which a water quality limited segment can tolerate without violating the applicable water quality standards. *See* 40 C.F.R. § 130.2(i). The portions of a receiving water's loading capacity that are allocated to existing or future point sources of pollution are known as waste load allocations ("WLAs"). *Id*. § 130.2(h). On the other hand, the portions attributed to existing or future nonpoint sources of pollution or to natural background sources are known as load allocations ("LAs"). *Id*. § 130.2(g). Thus, a TMDL is, in simple terms, the sum of WLAs and LAs.

and cadmium. *Id*. The Turner Reservoir in Rhode Island, into which the Ten Mile River flows at East Providence, is also listed for copper, lead, low dissolved oxygen, and phosphorus. *Id*. Likewise, the Seekonk River is on Rhode Island's List as a water with a TMDL underway for nutrients, low dissolved oxygen, and excess algal growth/chlorophyll *a*. *Id*. The Providence River and Narragansett Bay are also considered impaired waters due to high nutrients. *See* Rhode Island Department of Environmental Management ("RIDEM"), *Plan for Managing Nutrient Loadings to Rhode Island Waters* (Feb. 2005) ("Region's Resp. Ex. 11") at 2.

B. *Procedural Background*

The City's prior NPDES permit was issued on September 30, 1999, and expired on September 30, 2004. Region's Resp. at 30. The permit was administratively continued, pursuant to 40 C.F.R. § 122.6,[7] and on August 16, 2006, the Region issued, and sought public comments on, a draft permit. *Id*. The City, as well as other interested parties, including the Rhode Island Department of the Environment ("RIDEM"), submitted timely comments. *Id*. As a result of comments received from RIDEM, EPA proposed a revision to the draft permit's phosphorus limit. RTC at 1. On August 1, 2007, EPA reissued the draft permit to reflect the change in the phosphorus limit and to allow the public to comment on the change. *Id*. After reviewing comments made in response to the partially reopened public comment period, and obtaining a certification from Massachusetts pursuant to section 401 of the Clean Water Act ("CWA" or "Act"), 33 U.S.C. § 1341,[8] the Region prepared a response to comments document ("RTC") and issued the final NPDES permit decision.

On July 9, 2008, the City filed a timely petition for review of the final NPDES permit decision pursuant to 40 C.F.R. § 124.19, challenging certain aspects of the decision. *See* Petition for Review ("City's Petition"). The Region filed its response on August 28, 2008. On September 19, 2008, the City filed a reply to the Region's brief. *See* Reply of the Permittee, City of Attleboro, to Region 1's Response to Petition for Review ("City's Reply Brief"). On December 18, 2008, the Board held oral argument in this matter. *See* EAB Oral Arg. Tr. ("Tr."). The case now stands ready for decision by the Board.

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[7] The regulations governing the NPDES permitting program allow a federal permit to continue in effect after its expiration date in circumstances in which an application for permit renewal has been timely filed and is pending Agency review. 40 C.F.R. § 122.6.

[8] As explained in more detail below, *see infra* Part III, section 401(a)(1) of the CWA requires that the permit applicant seek a certification from the state where the discharge originates validating the permit's compliance with state water quality requirements. *See* CWA § 401(a)(1), 33 U.S.C. § 1341(a)(1).

III. *STATUTORY AND REGULATORY BACKGROUND*

The Clean Water Act establishes various goals that further the national objective of restoring and maintaining "the chemical, physical, and biological integrity of the Nation's waters." CWA § 101(a), 33 U.S.C. § 1251(a). One goal of the CWA is to eliminate the discharge of pollutants into navigable waters. CWA § 101(a)(1), 33 U.S.C. § 1251(a)(1). To this end, the CWA makes it unlawful to discharge pollutants into navigable waters except in compliance with the Act. CWA § 301(a), 33 U.S.C. § 1311(a). Discharge of pollutants in compliance with the Act requires, among other things, that the discharger have received an NPDES permit under CWA § 402, 33 U.S.C. § 1342. A discharger may receive an NPDES permit if, inter alia, the discharge meets the requirements of CWA § 301 setting forth limitations on effluent in discharges. In re City of Fort Worth, 6 E.A.D. 392, 394 (EAB 1996).

The CWA provides for the inclusion in NPDES permits of two different kinds of effluent limits for point sources: those based on the technology available to treat a pollutant, and those necessary to ensure that applicable state water quality standards are met. CWA §§ 301(b)(1)(A), (b)(1)(C), 33 U.S.C. §§ 1311(b)(1)(A), (b)(1)(C). Relevant to the case at hand is the second type, known as water quality-based effluent limits ("WQBELs"). These limits apply when technology-based effluent limits are insufficient to meet the applicable state water quality standards.

The CWA requires states to adopt water quality standards designed to protect the public health or welfare, enhance water quality, and advance the purposes of the CWA. CWA § 303(c)(2)(A), 33 U.S.C. § 1313(c)(2)(A). State water quality standards have three components: (1) one or more "designated uses" of each water body or water body segment; (2) water quality "criteria"; and (3) an antidegradation policy. *See id*.; 40 C.F.R. §§ 131.10-.12. Relevant to this case is the second component – water quality "criteria." Water quality criteria consist of numerical concentration levels and/or narrative statements specifying the amounts of various pollutants that may be present in each water body without impairing the "designated uses" of that water body. *See* U.S. EPA Office of Water, *NPDES Permit Writer's Manual* § 6.1.1, at 89 (1996).

In establishing effluent limits in an EPA-issued permit, the permitting authority is required to ensure compliance with the water quality standards of the state where the discharge originates. *See* CWA § 401(a)(1), 33 U.S.C. § 1341(a)(1). To that effect, the CWA requires that the permit applicant obtain a certification from the state where the discharge originates validating the permit's compliance with the pertinent federal and state water pollution control standards. *Id*. The permitting authority may not issue the permit until the state issues or waives certification. 40 C.F.R. § 124.53(a). In addition, the CWA contains several provisions mandating that the water quality of affected states is taken into ac-

count. Under section 401, the permitting authority is expressly required to ensure compliance with the water quality standards of other affected states. CWA § 401(a)(2), 33 U.S.C. § 1341(a)(2). In particular, section 401(a)(2) of the CWA requires EPA to notify any other state whose discharges may be affected by the proposed discharges. The permitting authority may not issue the permit unless it contains any necessary conditions to ensure compliance with applicable downstream state water quality requirements. *Id*. Similarly, federal regulatory provisions implementing the NPDES program require the permitting authority to consider the effect of the proposed discharge on downstream states, and establish conditions necessary to conform with the requirements of CWA § 401(a)(2). *See* 40 C.F.R. § 122.4(d) (prohibiting issuance of permit "[w]hen the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States[.]"); *id*. § 122.44(d)(4) (requiring inclusion of conditions necessary to conform to water quality requirements of all affected states).

IV. *DISCUSSION*

A. *Standard of Board Review*

Under the rules governing this proceeding, the Board ordinarily will not review an NPDES permit unless the Region based the permit on a clearly erroneous finding of fact or conclusion of law or the permit appeal raises an important matter of policy or exercise of discretion that warrants review. 40 C.F.R. § 124.19(a); *see In re Phelps Dodge Corp.*, 10 E.A.D. 460, 471 (EAB 2002); *In re Gov't of D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323, 332-33 (EAB 2002). In reviewing NPDES permits, the Board is guided by the concept articulated in the preamble to the part 124 permitting regulations, which states that the Board's power of review "should be only sparingly exercised" and that "most permit conditions should be finally determined at the [r]egional level." 45 Fed. Reg. 33,290, 33,412 (May 19, 1980); *accord In re City of Moscow*, 10 E.A.D. 135, 141 (EAB 2001).

The burden of demonstrating that the Board should review a permit rests with the petitioner. A petitioner seeking review must demonstrate that any issues and arguments it raises on appeal have been preserved for Board review, unless the issues or arguments were not reasonably ascertainable. 40 C.F.R. §§ 124.13, .19; s*ee City of Moscow*, 10 E.A.D. at 141; *In re City of Phoenix*, 9 E.A.D. 515, 524 (EAB 2000), *appeal dismissed per stip.*, No. 01-70263 (9th Cir. Mar. 21, 2002).[9]

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[9] In other words, the regulations require that persons who seek review of a permit decision "must raise *all reasonably ascertainable issues* and submit *all reasonably available arguments* sup-
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The Board frequently has emphasized that, to preserve an issue for review, comments made during the comment period must be sufficiently specific. *In re New Eng. Plating*, 9 E.A.D. 726, 732 (EAB 2001); *In re Steel Dynamics, Inc.*, 9 E.A.D. 165, 230-31 (EAB 2000); *In re Maui Elec. Co.*, 8 E.A.D. 1, 9 (EAB 1998). On this basis, we have often denied review of issues raised on appeal that the commenter did not raise with the requisite specificity during the public comment period. *See, e.g.*, *New Eng. Plating*, 9 E.A.D. at 732; *Maui*, 8 E.A.D. at 9-12; *In re Fla. Pulp & Paper Ass'n*, 6 E.A.D. 49, 54-55 (EAB 1995); *In re Pollution Control Indus. of Ind., Inc.*, 4 E.A.D. 162, 166-69 (EAB 1992).

Assuming that the issues have been preserved, the petitioner must state its objections to the permit and explain why the permit issuer's previous response to those objections is clearly erroneous, an abuse of discretion, or otherwise warrants review. 40 C.F.R. § 124.19(a); *see In re Town of Ashland Wastewater Treatment Facility*, 9 E.A.D. 661, 668 (EAB 2001); *In re Haw. Elec. Light Co.*, 8 E.A.D. 66, 71-72 (EAB 1998). A petitioner may not simply reiterate comments made during the public comment period, but must substantively confront the permit issuer's subsequent explanations. *In re Peabody W. Coal Co.*, 12 E.A.D. 22, 33 (EAB 2005); *accord*, *In re Dominion Energy Brayton Point, LLC*, 12 E.A.D. 490, 666 (EAB 2006).

Finally, a petitioner seeking review of issues that are technical in nature bears a heavy burden because the Board generally gives substantial deference to the permit issuer on questions of technical judgment. *Town of Ashland*, 9 E.A.D. at 667; *In re NE Hub Partners, L.P.*, 7 E.A.D. 561, 567-68 (EAB 1998), *review denied sub nom. Penn Fuel Gas, Inc. v. U.S. EPA*, 185 F.3d 862 (3d Cir. 1999).

B. *Analysis*

As noted earlier, the City of Attleboro seeks review of the effluent limits for nitrogen, phosphorus, and certain metals. *See* City's Petition at 5-31. In addition, the City contends that there were procedural deficiencies related to the issuance of the Permit that warrant re-opening of the public comment period and that the Region "unlawfully raised new issues for the first time in the [response to comments]." *Id.* at 32-35. We address each of these arguments below.

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porting their position by the close of the public comment period" on the draft permit. 40 C.F.R. § 124.13 (emphases added).

1. *Nitrogen Limit*

a. *Background*

The Permit limits total nitrogen in Attleboro's discharges to 8 mg/l between the months of May and October, inclusive. Region's Resp. Ex. 1 ("Permit") at 2. Because the Region concluded that nitrogen discharges from the Attleboro facility cause or contribute to violations of Rhode Island water quality standards for nitrogen, this limit was established to ensure compliance with Rhode Island's water quality standards.[10] RTC at 6-7 (Response #A.1); Fact Sheet at 6.

Rhode Island, like many other states, has not developed statewide numeric criteria for total nitrogen, nor has it developed site-specific numeric criteria for nitrogen for the affected waters in this case. RTC at 6-7 (Response #A.1). It has, however, developed narrative criteria. *See* 12-190-001 R.I. Code R. § 8.B.(1)-(2), 8.D.(1). Likewise, neither a TMDL nor a dynamic water quality model have been developed for the affected waters. Thus, the Region states that, in establishing a numeric limitation for nitrogen, it followed 40 C.F.R. § 122.44(d)(1)(vi), which provides guidance on how to translate state narrative water quality standards into numeric requirements.[11] *See* RTC at 7-8 (Response #A.1); Region's Resp. at 39-40. In particular, the Region followed subsections (A) and (B) of this section, which, among other things, authorize EPA to derive numeric effluent limits

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[10] Nitrogen poses the primary threat to water quality in marine waters. *See* RTC at 6 n.5. Thus, it is necessary to establish nitrogen limits to meet Rhode Island water quality standards.

[11] Section 122.44(d)(1)(vi) provides:

> Where a State has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits using one or more of the following options:
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> (A) Establish effluent limits using a calculated numeric water quality criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and will fully protect the designated use. Such a criterion may be derived using a proposed State criterion, or an explicit State policy or regulation interpreting its narrative water quality criterion, supplemented with other relevant information which may include: EPA's Water Quality Standards Handbook, October 1983, risk assessment data, exposure data, information about the pollutant from the Food and Drug Administration, and current EPA criteria documents; or
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> (B) Establish effluent limits on a case-by-case basis, using EPA's water quality criteria, published under section 304(a) of the CWA, supplemented where necessary by other relevant information; or

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"using a proposed State criterion, or an explicit State policy or regulation interpreting its narrative water quality criterion, supplemented with other relevant information" or to establish the effluent limit "on a case-by-case basis, using EPA's water quality criteria, published under section 304(a) of the CWA, supplemented where necessary by other relevant information." 40 C.F.R. § 122.44(d)(1)(vi)(A)-(B); *see* RTC at 7-8 (Response #A.1).

In the RTC, the Region explained that it relied on the best information reasonably available to establish the permit limit for nitrogen. *See* RTC at 8 (Response #A.1). Among the information the Region considered were more than fifteen years of water quality data, studies and reports evaluating nitrogen levels in the Narragansett Bay, several site-specific reports commissioned by Rhode Island to address nitrogen loading and to control the effects of cultural eutrophication in the receiving waters,[12] and actual measurements of nitrogen loadings from point source discharges, including a 1995-96 study by RIDEM Water Resources. *See id.* at 8-9. In establishing the nitrogen limit, the Region also relied on the results of a physical water quality model,[13] referred to by the parties as the MERL model.[14]

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> (C) Establish effluent limitations on an indicator parameter for the pollutant of concern * * * .

40 C.F.R. § 122.44(d)(1)(vi)(A)-(C).

[12] The studies and reports EPA evaluated included: *EPA's Nutrient Criteria Technical Guidance Manual: Estuarine and Coastal Marine Waters* (EPA, Oct. 2001); *Evaluation of Nitrogen Targets and WWTF Load Reductions for the Providence and Seekonk Rivers* (Dec. 2004); *Plan for Managing Nutrient Loadings to Rhode Island Waters* (RI-DEM, Feb. 1, 2005); *Nutrient and Bacteria Pollution Panel – Initial Report* (Governor's Narragansett Bay and Watershed Planning Commission, Mar. 3, 2004); and *Massachusetts Estuaries Project-Site-Specific Nitrogen Thresholds for Southeastern Massachusetts Embayments: Critical Indicators* (July 21, 2003, as revised). RTC at 8-9 (Response #A.1).

[13] A physical model is a physical representation of a natural system (e.g., a small scale copy of a system). *See* U.S. EPA, *Watershed Modeling, available at* http://www.epa.gov/watertrain/modeling. Physical models are one type of tool used to simulate water quality processes. Other tools used for the same purpose are mathematical models, which are also representations of systems based on a series of mathematical equations, and field measurements.

[14] The Marine Ecosystems Research Laboratory ("MERL") at the University of Rhode Island conducted the experiments that comprise this model. The model "was designed to predict the relationship between nitrogen loading and several trophic response variables in the Narragansett Bay system." RTC at 9-10 (Response #A.1). The model consisted of nine tanks (mesocosms), each of five meters deep and 1.83 meters in diameter. In the experiment, six of the mesocosms were fed nutrients in multiples of the estimated average sewage inorganic effluent nutrients loading to Narraganset Bay, and the remaining three were used as controls simulating a relatively clean Northeast estuary with no major sewage input. *Id.* For example, the nitrogen loading for the 1X mesocosm was 40 mg/m^2/day and the 2X was twice that, and so on, for a maximum load of 32X ("X" relates to multiples of the estimated average sewage inorganic effluent nutrient loading in Narragansett Bay). *Id.* at 10. The experiments

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Id. at 9.

Based on the available information and the MERL model, the Region determined that a nitrogen effluent limit of 8 mg/l was appropriate for the Facility.[15] In particular, the Region explained that "[o]f the various loadings scenarios available to it, EPA determined that a concentration-based limit of 8 mg/l would be necessary to address the excessive loadings from the Facility, which both EPA and Rhode Island have determined are contributing to ongoing water quality impairments in the Narragansett Bay system." RTC at 11 (Response #A.1). The Region also explained why, in its view, this limit is neither too lax nor too stringent,[16] and identified other considerations it factored in when assessing the protectiveness of the limit. *Id.* at 12. In particular, the Region explained that in "evaluating whether it had met its obligation under sections 301(b)(1)(C) and 401(a)(2) to ensure compliance with applicable water quality standards, * * * [it] also accounted for the fact that Rhode Island, when assigning permit limits to facilities within its own borders, * * * did not conclude more stringent limits would be necessary or appropriate at this time." *Id.* Under Rhode Island's permitting approach, "limits of 8 mg/l and 5 mg/l have been imposed on various Rhode Island POTWs whose discharges impact Narragansett Bay, and Rhode Island has recommended that similar limits be placed on certain Massachusetts facilities that are impacting the Bay." *Id.* The Region also concluded that "no less stringent limit could be imposed that would still ensure compliance with water quality standards of the severe existing eutrophic conditions in the Providence/Seekonk River system, indicating that it is significantly overallocated for nitrogen." *Id.* at 13.

Upon consideration of all this information, the Region concluded that the proposed limit of 8 mg/l was reasonable and sufficiently stringent to comply with the CWA and Rhode Island water quality standards. *Id.*

b. *Discussion*

The City raises numerous arguments challenging the nitrogen limitation. These arguments can be categorized as arguments challenging the technical deter-

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(continued)
were conducted from June 1981 through September 1983. *Id.* The results of this experiment have been used by RIDEM to evaluate nutrient loading in Rhode Island waters.

[15] The RTC explains that "[a]n effluent limit of 8 mg/l corresponds to a loading scenario in the Seekonk River of approximately 6.5X at current facility flows and 10X at 90% design flow." RTC at 11.

[16] *See* RTC at 12 (Response #A.1) (explaining that despite the severe nitrogen-related impairment in the receiving waters, EPA opted not to impose a limit based on more stringent loading scenarios in order to account for uncertainties associated with the physical model, but also noting that the decision to impose concentration, rather than mass limits, added a conservative element intended to enhance the protectiveness of the permit).

minations the Region made and arguments related to economic feasibility. *See* City's Petition at 5-19. The majority of the arguments fall into the first group. We address each group of arguments separately below.

(i) *Challenges to Technical Determinations*

The City takes issue with the approach the Region adopted in deriving the nitrogen limit, claiming that the Region based the limit on unreliable science and data. *See* City's Petition at 5-6, 8, 11; City's Reply Brief at 2-3; Tr. at 25. The City makes several arguments in support of this claim. First, it argues that the limit is erroneous because it is not based on site-specific waste load allocations ("WLAs") or other site-specific data or model.[17] *See* City's Petition at 5-8; *see also* City's Reply Brief at 2-3. The City also questions the use of the MERL model, suggesting that the model is unreliable,[18] inapplicable, and that the Agency had options available other than the use of the MERL model. *See* City's Petition at 7-9. In the City's view, the Region should have used any existing mathematical model or developed a site-specific model to guide its analysis, instead of using the MERL model. *See id.* at 9; Tr. at 27-28. The City also questions the equity of the limit relative to the limits imposed by RIDEM on Rhode Island dischargers, and identifies alleged errors in some of the assumptions the Region made.

Specifically, the City claims that: (1) the MERL experiment establishes general propositions but provides no reliable basis for derivation of specific limits for the facility, *see* City's Petition at 11; (2) the Region's conclusion that the system is too complex to simulate with available mathematical modeling is contradicted by the Region's reliance on the Kester Model to address dissolved oxygen,[19] *see id*. at 8-9; (3) the Region erred in using the MERL values because the

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[17] In its petition, the City seems to argue that WLAs are required by federal and state regulations as a precondition to establishing water quality-based effluent limits ("WQBELs"). *See* City's Petition at 10-11; *see also id*. at 27 (making same argument for phosphorus limits and citing RIDEM's Rules and *Arkansas v. Oklahoma*, 503 U.S. 91 (1994)). In its reply brief, the City adds support to this claim, arguing that WLAs are required by RIDEM's regulations and by RIDEM's comments on the draft permit. City's Reply Brief at 3, 14. However, at oral argument, the City steered away from this position, acknowledging that while it would be desirable to have WLAs prior to establishing WQBELs, neither the CWA nor Rhode Island regulations require such a precondition. *See* Tr. at 32-34. Since this issue is no longer a point of contention, we need not address the arguments the City appears to raise in its petition and reply brief that WLAs are required. We, nonetheless, will evaluate whether the limits are based on unreliable data and science, as the City asserts.

[18] At oral argument the City refined its argument, explaining that it is not suggesting that the model is unsound as general science, but instead that "[t]here's no criteria that allow the model to be applied to" this particular case. Tr. at 27.

[19] The City refers to the model the Region mentions on page 29 of the RTC – *Marine Chemistry 53, Modeling measurements, and satellite remote sensing of biologically active constituents in coastal waters*, D.R. Kester et al. (1996) – as the "Kester Model."

MERL deals with dissolved inorganic nitrogen ("DIN") instead of total nitrogen, *id*. at 14; (4) the Region erred in focusing upon the "Providence River" or the "Providence/Seekonk River system" when considering flushing rates, *id*. at 9-10; and (5) the Region "unduly restricted its own power to consider interstate equity and uniformity of treatment in fact," *id*. at 15-19.

We address each of these arguments in detail below. In our analysis we will first focus on determining whether the Region erred in relying on a physical model instead of a mathematical model. In doing so, we will also determine whether the Region's reliance on the Kester Model for certain purposes indicates that the Region had, and should have utilized, options to simulate the system other than the use of the MERL.

(a) *Region's Determination to Rely on a Physical Model*

The use of a physical model instead of a mathematical model or other site-specific model to derive effluent limitations is a technical judgment that falls within the Region's discretion and expertise. This is significant because where a petitioner seeks review of issues that are fundamentally technical in nature, the petitioner bears a particularly heavy burden as the Board generally defers to the permit issuer on questions of technical judgment. *Dominion Energy*, 12 E.A.D. at 510; *Peabody*, 12 E.A.D. at 33-34; *In re Teck Cominco Alaska, Inc*., 11 E.A.D. 457, 473 (EAB 2004).

When presented with technical issues, the Board looks to determine whether the record demonstrates that the permit issuer duly considered the issues raised in the comments and whether the approach ultimately adopted by the permit issuer is rational in light of all the information in the record. *Dominion Energy*, 12 E.A.D. at 510; *D.C. Mun. Separate Sewer Sys.*, 10 E.A.D. at 348; *NE Hub*, 7 E.A.D. at 568. If the Board is satisfied that the permit issuer gave due consideration to comments received and adopted an approach in the final permit decision that is rational and supportable, the Board typically will defer to the permit issuer. *NE Hub*, 7 E.A.D. at 568. Thus, the question here is whether the Region's determination to rely on the MERL model was addressed in the RTC and whether the Region's response is rational and supported in the record.

In its decision to rely on the MERL model instead of on a mathematical model, the Region considered the technical difficulty of developing an accurate mathematical model for nutrients, Rhode Island's approach to establishing WQBELs,[20] the severe cultural eutrophication in the receiving waters (i.e., the

[20] The Region found telling that RIDEM has relied on the MERL model as a basis to impose permit limits on Rhode Island facilities. *See* RTC at 9 n.7 (Response #A.1).

Seekonk/Providence River system), nitrogen's tendency to persist in the environment, and the credibility of the MERL model.[21] *See* RTC at 7-9 (Response #A.1). In particular, the RTC explained that, since 1995, RIDEM has attempted to create a mathematical model for this ecosystem, but its unsuccessful attempts have resulted in the conclusion that the system is too complicated to simulate with mathematical models. *Id*. at 7. The need to expeditiously address the problems in the receiving waters weighed heavily in favor of using the MERL model instead of waiting for the development of waste load allocations or a site-specific or mathematical model. *See id.* at 9. The Region explained:

> EPA * * * considered the need to expeditiously address the severe existing nitrogen-driven cultural eutrophication in the receiving waters. * * * [T]he tendency for nitrogen to * * * exacerbate existing water quality impairments [and] * * * persist in the environment in a way that contributes to future water quality problems counsels in favor of imposing such a limit on Attleboro's discharge based on information currently available to EPA.

Id. The Region's analysis also considered the limitations of the MERL model to predict with certainty the downstream impacts of nitrogen loading from the Facility,[22] but concluded that, under the circumstances, reliance on the model along

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[21] The Region noted that the model has been cited by EPA in its guidance documents and that the MERL model has been peer-reviewed and published in a scientific journal. *See* RTC at 9 (Response #A.1) (explaining, *inter alia*, that the MERL experiments have been cited in EPA's guidance documents as compelling evidence that nitrogen criteria are necessary to control enrichment of estuaries); Region's Resp. at 42 (explaining that the model has been peer-reviewed).

[22] The Region explained:

> EPA recognizes, however, that the MERL tank experiments cannot completely simulate the response of chlorophyll *a* and dissolved oxygen to nitrogen loadings in a complex, natural setting such as the Providence/Seekonk River system, and thus does not yield a precise level of nitrogen control required to restore uses in the system. For example, dissolved oxygen in Narragansett Bay is influenced by stratification, which was not simulated in the MERL tank experiment, in which waters were routinely mixed. In a stratified system there is little vertical mixing of water, so sediment oxygen deficits are exacerbated due to the lack of mixing with higher DO waters above. In addition, the flushing rate used in the MERL tanks is not the same as seen in the Bay. The model's lack of stratification could result in it being significantly less conservative than the natural environment. On the other hand, the failure of the model to mirror the flushing rates in Narragansett Bay could render it overly conservative when compared to natural conditions, but to what degree is unclear. Because the physical model does not generate a definitive level of nitrogen control that can be applied to a real world discharge, but

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with other pertinent information was reasonable. *See id*. at 9-11.

In our view, this shows that the Region considered the limitations and uncertainties associated with the use of the MERL model but, based on the factors stated above, decided to exercise its technical expertise and scientific judgment in translating the laboratory results the MERL provided into WQBELs for the Facility. We see no clear error in this approach. While the use of a mathematical model could be more reliable than the use of a physical model, due to the difficulties in simulating bio-chemical processes, physical models are nonetheless used and relied upon by the scientific community to simulate water quality processes.[23] *See, e.g.*, Office of Water Resources, RIDEM, *Evaluation of Nitrogen Targets and WWTF Load Reductions for the Providence and Seekonk Rivers* at 1 (Dec. 2004) ("Region's Resp. Ex. 13") (explaining that "[w]hen functioning properly, a water quality model predicts an accurate water quality condition that results from a set of inputs (pollutant loadings) to the system. A computer-based numerical model is typically used, however, a physical model can also serve as the analog for the river.").

The fact that the Region acknowledged that there were limitations in using the MERL model does not, without more, disqualify the model from being used as guidance in the determination of effluent limits for this permit.[24] Scientific uncertainty provides no basis for the Region to refrain from exercising its judgment. In fact, this Board has rejected the suggestion that, when presented with scientific uncertainty, the permitting authority should not exercise its discretion. *See In re Dominion Energy Brayton Point, LLC*, 13 E.A.D. 407, 426 (EAB 2007) (rejecting, in a different context, suggestion that a greater level of scientific certainty was required for the permitting authority to make a determination). We have noted instead that "[i]n the face of unavoidable scientific uncertainty, the Region is authorized, if not required, to exercise reasonable discretion and judgment." *Id*. at 25. We thus reject the City's suggestion that in the absence of a mathematical or

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> instead a range of loading scenarios which are subject to some scientific uncertainty, EPA was required to exercise its technical expertise and scientific judgment based on the available evidence when translating these laboratory results and establishing the permit limit.

RTC at 11 (Response #A.1).

[23] While in this context mathematical models may in general be more reliable than physical models, mathematical models are also subject to uncertainty due to the numerous assumptions that go into their development. *See Clean Water Act Permit Guidance Manual* (April 1984) ("The use of all models, even sophisticated, well-developed ones, is attended by considerable uncertainty.").

[24] *Cf. Chem. Mfrs. Ass'n v. EPA*, 28 F.3d 1259, 1264 (D.C. Cir. 1994) ("That a model does not fit every application perfectly is no criticism; a model is meant to simplify reality in order to make it tractable.").

site-specific model, the Agency cannot exercise its discretion to rely on a physical model. Moreover, contrary to suggestions by the City, this does not strike us as a case where there is no rational relationship between the model and the pollutant to which it is applied. *See Columbia Falls Aluminum Co. v. EPA*, 139 F.3d 914, 923 (D.C. Cir. 1998) ("An agency's use of a model is arbitrary if that model bears no rational relationship to the reality it purports to represent") (internal quotation marks omitted); *Chemical Mfrs. Ass'n v. EPA*, 28 F.3d 1259, 1265 (D.C. Cir. 1994) (noting that "we must reverse the agency's application of [a] model as arbitrary and capricious if there is simply no rational relationship between the model and the known behavior of the hazardous air pollutant to which it is applied"). The MERL model, as noted earlier in this decision,[25] studied the impact of nutrient loading in Rhode Island waters, specifically, the Narragansett Bay, into which the Seekonk and Providence Rivers discharge.[26] In light of the foregoing, we find no clear error in the Region's determination to rely on a physical model.

We disagree with the City that the Region's reference to the Kester Model in the RTC contradicts the Region's conclusion that the system is too complex to simulate with available mathematical models.[27] The Region only cites the Kester Model for the discrete purpose of explaining the impact on dissolved oxygen levels from Biological Oxygen Demand ("BOD") discharges into Upper Narragansett Bay. More specifically, in responding to comments suggesting that nutrient over-enrichment is not the only reason for oxygen depletion in the Providence River, the Region observed, citing the Kester Model, that "Biological Oxygen Demand (BOD) from direct discharges to Upper Narragansett Bay has been shown to have minimal impact on dissolved oxygen levels." *See* RTC at 28-29 (Comment & Response #B.2.a).

We see no clear error or contradiction in the Region's decision to rely on this model for this specific point while not using it to establish nitrogen limits. The Kester Model was designed to, among other things, evaluate oxygen water quality in the upper portion of Narragansett Bay. *See* Region's Resp. Ex. 26 ("Kester Model") at 131 ("The box model approach was applied in greater detail to

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[25] *See supra* note 14.

[26] *See Chem. Mfrs.*, 28 F.3d at 1265 ("[T]he normal criterion by which to evaluate a model is not the accuracy of the assumptions from which it proceeds but the utility of the results it produces.").

[27] The City argues that either modeling is not possible, in which case the Region should not have relied upon the Kester Model for dissolved oxygen, or modeling is possible, and the Region should have used this model for determining nitrogen limits as well. *See* City's Petition at 9; City's Reply Brief at 4. The City adds that nothing in the RTC or the Region's response brief explain why the Region did not use the model beyond citing a discrete point about dissolved oxygen. City's Petition at 9; City's Reply Brief at 5. According to the City, the Region should have used the model for nitrogen or explained why it did not do so. City's Petition at 9. If the model is not valid, the City adds, the Region should have never cited or relied upon it for any purpose. *Id.*

the upper portion of Narragansett Bay to provide transport terms for use in an oxygen water quality evaluation."); *id*. ("The model provides a basis to estimate the relative importance of various processes that may cause low oxygen conditions in the waters."); *id*. at 132 (explaining that the results of the box model analysis of the upper portion of Narragansett Bay were applied to a dissolved oxygen model); *id.* at 140 ("One value of a model such as this is that it allows one to examine the sensitivity of oxygen concentrations to specific terms in the model."). The Region relied on the Kester Model for the purpose of addressing BOD because the model results had been calibrated and validated to examine impacts on oxygen concentrations. *See id*. at 140 (noting that "calibration [of the model] consisted of selecting specific values of rate constants for the various processes affecting oxygen"). Accordingly, we reject the City's suggestion that the Region's use of the Kester Model in addressing a different pollutant, in this case BOD, invalidates its conclusion that the system is too complex to model for purpose of determining nutrient impacts.

The record contains no basis for second-guessing the Region's determination that the system is too complex to simulate nutrients with available mathematical models simply because of the existence of the Kester Model. The record before us provides no indication that the Kester Model will adequately address nutrient impacts or that it would be helpful in deriving nitrogen permit limits. Contrary to the City's suggestions, the analyses Kester conducted did not focus on nutrients per se.[28] In its introduction, the paper summarizing the Kester Model explains the scope of the model and the various investigations conducted that led to the conclusions and results presented in the paper. *See* Kester Model. None of the investigations or analyses Kester conducted were applied to nutrients. *Id*. at 132.[29] The only element of the model relevant to our discussion – a box model analysis of the Upper Narragansett Bay – was applied to dissolved oxygen, not

[28] The City suggests that the Kester Model could be used to simulate the system in this case. In support the City argues that: (1) the Kester Model includes the Providence and Seekonk Rivers, *see* City's Petition at 8; (2) the Kester Model does not only concern dissolved oxygen, it also concerns nutrients, specifically nitrogen, *see* City's Reply Brief at 5 (citing Kester Model at 132, 137, 140); (3) the model itself appears to have evaluated nutrients and eutrophication in conjunction with oxygen. City's Reply Brief at 5.

[29] The Kester Model consisted of: (1) an examination of dissolved copper concentrations in Narragansett Bay; (2) "the formulation of a simple box model for transport processes in Narragansett Bay that can be used to examine the non-conservative behavior of a reactive pollutant such as copper"; (3) "a more extensive box model analysis of the upper portion of Narragansett Bay where there are major water quality concerns associated with extensive urban and industrial development" which results were applied to a dissolved oxygen model; (4) an evaluation of a rapid-pulse oxygen sensor for marine environmental use; and (5) "results from and examination of Coastal Zone Color Scanner chlorophyll images for northeastern U.S.A. waters." Kester Model at 132 (Introduction).

nitrogen or other nutrients as the City implies.[30] *See id*. ("These box model results have been applied to a dissolved oxygen model"); *id.* at 140 (explaining that the level of complexity used in the model did not attempt to model phytoplankton abundance from, *inter alia*, nutrient concentrations). Indeed, at oral argument the Region explained that the model has not been calibrated or validated for nutrients in Upper Narragansett Bay. *Id.* at 58. This coupled with the well-documented fact that RIDEM had for at least a decade attempted without success to simulate through the use of mathematical models the reduction in nutrients necessary to meet water quality standards in Narragansett Bay[31] adequately supports a conclusion that the Region did not clearly err in determining that the Kester Model does not adequately address nutrients and thus should not be used in deriving nitrogen limits. In addition, for other permits, the MERL model, not the Kester, was used for determining nutrient impacts in Rhode Island waters. *See id.* at 58.

The Board declines to remand the permit for the purpose of having the Region attempt to model nutrient impacts in Rhode Island waters based on the

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[30] Page 137 of the paper describing the model contains a reference to modeling the dynamics of "oxygen, nutrients and phytoplankton." However, the model was not validated for nutrients or phytoplankton. *See* Kester Model at 137-141.

[31] In its 2005 Plan for Managing Nutrient Loadings to Rhode Island Waters, RIDEM explained as follows:

> Water quality sampling and modeling studies, for the most part commissioned by the Narragansett Bay Project between 1985-1990, indicated that additional data collection and a more detailed computer model was necessary to predict the reduction in nutrients necessary to meet water quality standards. Since1995, [RI]DEM has conducted additional fieldwork, hired a consultant and worked with a technical advisory committee (TAC), consisting primarily of scientists and engineers representing academic, municipal, state and federal organizations, to calibrate a model and develop a water quality restoration plan or TMDL, for the Providence and Seekonk Rivers. It was recently determined that the hydrodynamic model formulation could not adequately simulate conditions due to the relatively severe changes in the bathymetry in the Providence River.

RIDEM, *Plan for Managing Nutrient Loadings to Rhode Island Waters* (Feb. 2005) ("Region's Resp. Ex. 11") at 3; *see also* Region's Resp. Ex. 13 at 1 (explaining that despite efforts in collecting data and working with a contractor to develop a water quality model for establishing a nitrogen reduction plan, problems in the calibration and validation of the mass transport component of the model have made it impossible to simulate the chemical and biological behavior of the system).

Kester model.[32] Review on this basis is denied.[33]

(b) *Application of Model to Facility and Affected Waters*

Since we have found no clear error in the Region's determination to rely on a physical model, we now will determine whether the Region clearly erred in its application of the MERL model to the specifics of the Facility and affected waters. In doing so, we will examine whether the Region considered site-specific information, whether the Region erred in using the MERL values, and whether it erred in its consideration of flushing rates.

(1) *Whether the Region Considered Site-Specific Information*

The RTC explains that in establishing the nitrogen limits, the Region considered site-specific data, including data from point source discharges,[34] and specifics regarding Attleboro's discharges into the Seekonk River system, such as the location of its discharges and its relative contribution to the system.[35] *See* RTC at 13 (Response #A.1). The Region also considered the connection between the MERL model and the natural environment, noting, *inter alia*, that "[b]oth the MERL tank experiments and the data from the Providence/Seekonk River system indicate a clear correlation between nitrogen loadings, dissolved oxygen impairment[,] and chlorophyll *a* levels." *Id.* at 10.[36]

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[32] *See In re Envotech, L.P.*, 6 E.A.D. 260, 284 (EAB 1996) ("[A]bsent compelling circumstances, the Board will defer to a Region's determination of issues that depend heavily upon the Region's technical expertise and experience.").

[33] As the City points out, neither the RTC nor the Region's response brief explicitly address why the Region did not use Kester for nutrients. *See* City's Reply Brief at 5; Tr. at 28-30, 35. However, in both documents the Region explained that its decision to use a physical model, instead of developing a mathematical one, was based on Rhode Island's experience trying to develop such a model. Clearly, the Region was well aware of the Kester Model in that context.

[34] RTC at 9 (Response #A.1) ("In establishing the nitrogen limit in this permit, and evaluating the MERL model, EPA also considered actual measurements of nitrogen loadings from point source discharges, including a 1995-96 study by RIDEM Water Resources.").

[35] In the RTC, the Region explained that "[c]ontrary to the commenter's suggestion, in establishing the nitrogen limit, EPA did take into account specifics regarding Attleboro's discharge, including the location of its discharge and its relative contribution to the Seekonk River system." RTC at 13. In particular, the Region calculated the relative contribution of the different POTWs that discharge into the Seekonk River (i.e., the nitrogen loading), including Attleboro. *See id.* Attachment 11.

[36] *See also* RTC at 11 (explaining that correlation between nitrogen loadings and chlorophyll *a* levels shown by MERL is consistent with RIDEM data from 1995-96, "which indicate that * * * chlorophyll *a* levels in the three Seekonk River monitoring stations ranged from 14 ug/l to 28 ug/l");

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In particular, the Region relied on a study RIDEM conducted where it evaluated nitrogen and load reductions from wastewater treatment facilities in the Providence and Seekonk Rivers. *See* Region's Resp. Ex. 13. That study compared the Providence and Seekonk River with the MERL experiment. *Id.* at 9-17.

This shows that the Region did consider site-specific information and the correlation between the model and the affected waters. Thus, we now determine whether the Region clearly erred in its analysis as it applied the model to the specifics of the Facility and the affected waters. Specifically we will examine the Region's determinations regarding the use of the MERL model despite it being based on DIN, rather than total nitrogen, and despite concerns over flushing rates.

(2) *Whether the Region Erred in Using the MERL Values*

The City argues that the Region erred in using the MERL values because the MERL is based on DIN, rather than total nitrogen. However, the Region addressed this concern in the RTC explaining how it converted from DIN to total nitrogen.[37] *See* RTC at 36 (Response #B.2.d). The City does not address the Region's RTC by explaining why such conversion is inadequate. Thus, the City has provided no reason for the Board to second-guess the Region's technical judgment in this regard. *See Peabody*, 12 E.A.D. at 33 (explaining that "the petitioner may not simply reiterate comments made during the public comment period, but must substantively confront the permit issuer's subsequent explanations"); *see also Dominion Energy*, 12 E.A.D. at 666. We thus decline to review the permit on this basis.

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id. ("The basic relationship demonstrated by the MERL tank experiments between the primary causal and response variables relative to eutrophication corresponds to what is actually occurring in the Providence/Seekonk River system.").

[37] The Region explained its reliance on the model despite it being based on DIN as follows:

> The 2004 loading study was done on data based on DIN, and the recommended loadings from the POTWs were developed using DIN. However, in establishing effluent limitations for POTWs the recommended DIN limits were adjusted to TN [total nitrogen] by increasing the recommended limits by 2 mg/l (see page 20). A check of effluent data from the Bucklin Point facility for 2007 confirms that the difference between TN and DIN averaged about 1.4 mg/l with a maximum of 2 mg/l, confirming that the RIDEM estimates are valid. (The DMR data for Attleboro could not be used because all of the components of DIN are not required to be reported).

RTC at 36 (Response #B.2.d).

(3) *Whether the Region Erred in its Consideration of Flushing Rates*

Another flaw in the Region's analysis, according to the City, is its consideration of flushing rates.[38] The City asserts that the Region erred in its consideration of flushing rates because it focused upon the Providence River or the Providence and Seekonk River system, instead of the Seekonk River. City's Petition at 9-10. The City claims that the Region failed to address its comments about flushing in the Seekonk River. *See id.*

The comments raised during the public comment period questioned "[t]he use of the MERL data to analyze the Seekonk and Providence River[s] system" on the basis that "there are several critical and important differences between the conditions in the Bay and in the Providence and Seekonk River[s] system." RTC at 34 (Comment # B.2.d). To illustrate this point, the comments noted that the MERL's flushing rate is 7.8 times greater than the flushing rate of the Providence River and twenty-two times greater than the Seekonk River's. *Id.* ("[T]he MERL experiments were conducted under simulated flushing conditions that are almost 7.8 times lower than the conditions in the Providence River."); *id.* at 35 ("The effect is even more dramatic for the Seekonk River. The 1991 studies cited by RIDEM indicate that the average flushing time of the Seekonk River is 1.2 days. Thus, for the Seekonk [R]iver system, the flushing rate is 22 times greater * * * .") (citations omitted).

Initially, we reject any argument that the Region erred by focusing on the Providence and Seekonk River system, or any implication that the Region's analysis should have focused solely on the Seekonk River. We do not read the reference to the Seekonk River's flushing rate made in comments as implying that the Region should focus its analysis only on the Seekonk River. On the contrary, it is clear from the RTC that the Region focused on the Providence and Seekonk River system in response to the comments that were raised, as the commenter questioned the use of the MERL data to analyze the Seekonk and Providence Rivers system. Further, we see no clear error in the Region's consideration of the Providence and Seekonk system, as opposed to solely the Seekonk River. The nitrogen limit was imposed to meet Rhode Island water quality standards, and all these waters are impaired as result of excessive nitrogen loading.[39] The record shows that Massachusetts facilities, including Attleboro, have the reasonable potential to contribute to violations of Rhode Island standards in the Seekonk and Providence Rivers, and thus, the Region's consideration of the whole system does not strike

[38] Flushing rate refers to the rate at which water in a water body is replaced by new water.

[39] *See* Fact Sheet at 8-10; *see also* Region's Resp. Ex. 13 at 18-21; Region's Resp. Ex. 11 at 2 .

us as unreasonable.[40]

The City faults the Region for allegedly failing to address its comments about the flushing rate in the Seekonk River. We find this argument unsupported.

In context, the references to the flushing rates of the individual rivers were set forth as support for the broader point made in comments – that the use of the MERL data to analyze the Seekonk and Providence Rivers system is questionable. By claiming that the Region failed to consider the Seekonk River in its analysis, the City seems to imply that, in the RTC, the Region had an obligation to address with specificity each individual illustrative point. We disagree.

The regulation governing response to comments in a permit proceeding requires that the Region "[b]riefly describe and respond to all significant comments * * * ." 40 C.F.R. § 124.17(a)(2). Significantly, this regulation does not require the Region's response to be of the same length or level of detail as the comment. *See In re Hoechst Celanese Corp.*, 2 E.A.D. 735, 739 n.7 (Adm'r 1989) ("Once the Agency has reached a reasonable and legally proper permit decision based on the administrative record, it need not provide detailed findings and conclusions, but instead must reply to all significant comments * * * as required by 40 C.F.R. § 124.17."). Therefore, contrary to the City's suggestion, the permit issuer is not required to address each and every point made in comments. It is only required to address all significant comments. *E.g.*, *In re Indeck-Elwood, LLC*, 13 E.A.D. 126, 167 n.80 (EAB 2006); *NE Hub*, 7 E.A.D. at 583.

While perhaps not to the extent the City would have liked, the record does show that the Region considered the significant comment that was brought to its attention – the transferability of MERL data in light of the difference in flushing rates between the MERL model and the Seekonk and Providence Rivers system. In its response, the Region first acknowledged the differences between the flushing rates of the MERL and the Providence River. RTC at 35 (Response #B.2.d). Then, while not as explicitly as it did with the Providence River, the Region considered the differences between the model and the Seekonk River. Particularly, the Region noted that the difference between the MERL tank experiments and the

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[40] *See* Fact Sheet at 8-12; *see also id.* at 11 (noting that Massachusetts facilities, which includes Attleboro, contribute 38% of the total nitrogen load to Upper Narragansett Bay, and 73% of the total nitrogen load to the Seekonk River, which is the most severely impaired section of Upper Narragansett Bay); RTC at 7 (Response #A.1) (noting that discharges of nitrogen from the Attleboro facility "cause or contribute to violations of Rhode Island's water quality standards for nitrogen" and that "it has been recognized that Rhode Island and Massachusetts municipal wastewater treatment facilities are a significant source of nutrients to the Seekonk River, Providence River and Upper Bay") (citations omitted); *id.* at 32 (Response #B.2.b) (noting that the Region estimated that from May through October 2007 the North Attleborough POTW and the Facility contributed approximately 90% of the total nitrogen load into the Ten Mile River with the Facility contributing 84% of that total).

1995-96 ambient data from the Providence and Seekonk Rivers system is one of the factors it considered in its decision not to impose a more stringent nitrogen load reduction. *Id*. It also explained that "[i]n extrapolating these laboratory results to the natural environment, EPA determined that a 10[X] loading limit was reasonable to account for this uncertainty," adding that "[a]fter implementation of the required nitrogen reductions at all POTWs, the permitted nitrogen loading rate to the *Seekonk River* will still reflect the 10[X] loading rate." *Id*. (emphasis added). In its response to the petition, the Region further explains that, to account for these uncertainties (i.e., the differences in flushing rate between the Seekonk and Providence Rivers with the MERL model), it chose to impose a limit based on a 10X scenario instead of a more stringent limit based on a 2X or 4X loading scenario. *See id.*; Region's Resp. at 49.[41]

Thus, as the record shows, the Region was well aware of the differences between the Seekonk River and the MERL model and explained how it dealt with those differences as to the Seekonk River as well as to the river systems more generally. In addition, to the extent that the City tries to question the transferability of the MERL data to the Seekonk River, the City has failed to meet its burden. The City's only argument on appeal is that the Region failed to consider the Seekonk River, which we reject. The City provides no refutation of the Region's analysis or other specifics. By failing to address why the Region's explanation as to the transferability of the data did not acceptably account for the differences between the MERL model and the Seekonk River, the City fails to meet its burden and thus review is denied.

Lastly, the City has failed to explain how sole consideration of the Seekonk River's flushing rate would affect the nitrogen limit.[42] In its petition and reply brief, the City makes general assertions about the connection between flushing rates and dilution, *see* City's Petition at 9, City's Reply Brief at 6, but does not elaborate on the subject nor does it explain how that affects the limit.[43] This Board

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[41] Indeed, the 2004 *Evaluation of Nitrogen Targets and WWTF Load Reductions for the Providence and Seekonk Rivers* mentions that "[e]xperimental data indicate that the 2X and 4X conditions * * * are the likely goal from the perspective of consistency with the State's water quality standards"). Region's Resp. Ex. 13 at 25.

[42] Presumably, the City's point is that higher flushing rates contribute to less nutrient uptake, thus requiring a less stringent limit. However, the record shows that the Seekonk River is the most severely impaired section of the Upper Narragansett Bay system. Also, it seems that having faster flushing rates in the Seekonk River advocates in favor of considering downstream waters, as nutrients would then be flushed down the stream.

[43] Specifically, the City claims that flushing rates correlate directly with dilution and that the Region is required to consider dilution according to 40 C.F.R. § 122.44(d)(1)(ii). City's Petition at 9. We note, however, that this provision does not mandate consideration of dilution at all times when establishing permit limits, as the City suggests. As explained in more detail below, *see infra*

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has often emphasized that a petitioner seeking review of a technical issue bears a particularly heavy burden and that mere allegations of error are not sufficient to support review of a permit condition. *E.g.*, *City of Moscow*, 10 E.A.D. at 172; *New Eng. Plating*, 9 E.A.D. at 737; *In re Hadson Power 14 Buena Vista*, 4 E.A.D. 258, 294 n.54 (EAB 1992). Thus, a petitioner must support its allegations with solid evidence that demonstrates how the permit issuer clearly erred in its decision making. *Town of Ashland*, 9 E.A.D. at 667; *NE Hub*, 7 E.A.D. at 567. As we have stated in the past, in a challenge to technical issues, we expect a petitioner to present us with references to studies, reports or other materials that provide relevant, detailed, and specific facts and data about permitting matters that were not adequately considered by a permit issuer. *In re Envtl. Disposal Sys., Inc.*, 12 E.A.D. 254, 291 (EAB 2005). Notably, the Region did address in both the response brief and RTC other considerations central to the nitrogen limit. *See* Region's Resp. at 49; RTC at 13 (Response #A.1). Specifically, the Region determined that "no less stringent limit could be imposed that would still ensure compliance with water quality standards in light of the severe existing eutrophic conditions in the Providence/Seekonk River system." RTC at 13. Also, the Region added, "RIDEM has indicated that nitrogen limits as low as the limits of technology (i.e., 3 mg/l) may be necessary to achieve water quality standards * * * ." *Id.* Against this backdrop, the City's failure to show how sole consideration of the Seekonk River's flushing rate would impact the proposed permit limit constitutes a further basis for denying review of this issue.

(c) *Whether the Region Clearly Erred by Restricting its Power to Consider Equity and Uniformity*

Next, the City contends that Attleboro's nitrogen limit is stricter than the limits imposed on Rhode Island facilities and that the Region "unduly restricted its own power to consider interstate equity and uniformity of treatment in fact." City's Petition at 12, 15. In support of these claims, the City makes three arguments. First, the limit chosen for Attleboro (i.e., 8 mg/l) "places a disproportionate burden upon Attleboro's nitrogen contribution, compared to Rhode Island plants," because it does not account for attenuation[44] for the discharges from the Attleboro

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Part IV.B.1.b.i.(c)(1), section 122.44(d)(1)(ii) provides that "[w]hen determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for * * * where appropriate, the dilution of the effluent in the receiving water." 40 C.F.R. § 122.44(d)(1)(ii). As such, it requires the permit issuer to consider dilution "where appropriate." In any event, the Region did consider the differences in flushing rates in its analysis.

[44] Nitrogen attenuation refers to the loss of nitrogen that occurs during tributary river transport between the point of discharge and the point of impact. Region's Resp. Ex. 13 at 18. Attenuation is
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Facility. City's Petition at 15. Second, the Region "applies to Attleboro limits that Rhode Island itself has postponed for its own in-state discharges." *Id.* Finally, the Region "ignores the major cause of the impairment (removing the dam)." *Id*. As explained in more detail below, the City makes numerous other arguments in support of these claims. In essence, however, the arguments raise questions about the equity of the nitrogen limit, *see id.* at 12, 15-17, and whether the limit was necessary to meet Rhode Island water quality standards, *id*. at 18. We address each of these issues below.

(1) *Equity & Attenuation Arguments*

In the RTC, the Region explained that one of the factors it considered in determining the reasonableness of the nitrogen limit was the fact that Rhode Island has established limits in the range of 5 mg/l to 8 mg/l on POTWs in Rhode Island whose discharges impact Narragansett Bay. *See* RTC at 12 (Response #A.1).

The City argues that Rhode Island plants are allowed higher nitrogen contributions into Rhode Island waters and thus Attleboro's nitrogen limit places a disproportionate burden upon the Facility. City's Petition at 12, 15. To prove its point, the City provides a table comparing its "effective contribution" to the Seekonk River to the contributions of Rhode Island facilities to Rhode Island waters.[45] *See id*. at 16. "Effective contribution" means the concentration of nitrogen, in mg/l, the Facility's discharges will allegedly contribute to the Seekonk River after attenuation. According to the table, Attleboro's "effective contribution" into the Seekonk River after attenuation will range from 3.4 mg/l to 4.3 mg/l,[46] while Rhode Island facilities will allegedly contribute 5 mg/l and 8 mg/l. Thus, the City argues, "requiring an 8 mg/l concentration of nitrogen at the Attleboro WWTF

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"predicated on the idea that some degree of nitrogen removal due to permanent uptake or denitrification [e.g., attenuation] occurs in the river * * * ." *Id.*

[45] The City's petition is not clear as to where these facilities discharge. Our review of the record shows that not all the facilities the City lists in its table discharge into the Seekonk River. For example, some of the facilities discharge into tributaries of the Seekonk River (i.e., the Woonsocket facility discharges into the Blackstone River), tributaries of the Providence River (the Cranston, Warwick and West Warwick facilities discharge into the Pawtuxet River), and the Providence River (i.e., NBC Field Point, East Providence). *See* RTC at 13 n.12; Region's Resp. Ex. 13 at 18-19.

[46] To illustrate its point, the City uses 4.3 mg/l, which is based on the percentage the Region allegedly assigned to nitrogen discharges from the Attleboro Facility into the Ten Mile River (i.e., 90%). *See* City's Petition at 16. However, the City claims that the Region overestimated the percentage of nitrogen contribution from the Facility into the Ten Mile River. According to the City, the Facility contributes "only 70% of the total nitrogen load to the Ten Mile River," not 90%. *Id.* Thus, in the City's view, the correct "effective contribution" from the Facility is 3.4 mg/l, which is based on a nitrogen contribution into the Ten Mile River of 70%. *Id*.; *see also* RTC at 19 (Comment #A.3); *id.* at 30 (Comment #B.2.b). The City illustrates its point using 3.4 mg/l as well.

outfall is excessive to achieve an 8 mg/l (or even a 5 mg/l) concentration of nitrogen from the plant in the Seekonk River which is all that Rhode Island has nominally required of its in-state plants." City's Petition at 16. In other words, the City believes that the Facility should be allowed to discharge higher concentrations of nitrogen as Rhode Island facilities have allegedly been allowed to do.

The City raised these same arguments in comments below, where it also focused on the equity of the limit imposed upon the Facility. *See* RTC at 18-19 (Comment #A.3.a). Dissatisfied with the response the Region provided, on appeal the City challenges part of that response. In particular, the City takes issue with the Region's response regarding attenuation. In responding to the City's comments showing how, if one accounts for attenuation, the nitrogen contributions from Attleboro into the Seekonk River are less than the contributions from Rhode Island POTWs, the Region explained that the City's calculation of total nitrogen discharged to the Seekonk River is based on an incorrect calculation of attenuation, and added:

> [T]he current assumed attenuation rate (40%) in the Ten Mile River [which the City used in its calculations] is expected to significantly decrease in the future because nitrogen currently utilized in the phosphorus-driven eutrophication of the fresh water segments of the Ten Miler River and its impoundments is expected to diminish when Attleboro and North Attleborough achieve the more stringent phosphorus limits in their permits.

RTC at 20 (Response #A.3.a); *see also* RTC at 13-14 (Response #A.1) (comparing relative contributions of POTWs that discharge into the Seekonk River under two scenarios, one using attenuation and one using zero attenuation); *id.* at 32 (Response #B.2.b) (explaining why City's calculation of delivery factor was erroneous, and noting that "[i]n any event, * * * the attenuation in the Ten Mile River is expected to decrease with decreasing phosphorus levels").

On appeal, the City argues that the Region should have applied a 40% attenuation[47] in its determination of the permit limit instead of discounting it totally.[48] Citing 40 C.F.R. § 122.44(d)(1)(ii), the City claims that discounting attenuation in

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[47] Forty percent is the estimated attenuation rate at the Ten Mile River based on data obtained from a 1995-96 study done by RIDEM. *See* Region's Resp. Ex. 13 at 19-20; Fact Sheet at 11.

[48] In assessing the reasonableness of the nitrogen limit, the Region compared the contributions of all the POTWs whose discharges eventually reach the Seekonk River. *See* RTC Attachment 11. In its analysis, the Region compared the load of nitrogen each of these facilities contribute to the Seekonk River with and without attenuation. *See id*. The Region relied in part on this analysis to justify its decision not to reduce the nitrogen limit based on current attenuation.

its totality is illegal. City's Petition at 12. The City also challenges the Region's observation that attenuation is expected to decrease in the future due to phosphorus reductions, arguing that the Region does not have enough information to assume a "simple relationship" between future phosphorus reductions and attenuation in light of the Region's "concession that '[p]hysical conditions such as stratification, temperature, tidal stage, wind[-]induced mixing and re-aeration can affect the system.'" *Id.* at 13 (citing RTC at 29).

In sum, in the City's view, not accounting for attenuation gives Rhode Island facilities an inequitable advantage, allowing those facilities to discharge more nitrogen into Rhode Island waters than Massachusetts facilities and, therefore, Attleboro should have been assigned a less stringent limit. We reject the City's claims. Our analysis follows.

As a preliminary matter, even if the City had established a disparity, which as explained below it has not, a disparity in requirements imposed on POTWs is not by itself a matter warranting review. Permits are issued on an individual basis, taking into account individual differences as appropriate. *See In re City of Port St. Joe*, 7 E.A.D. 275, 304 n.44 (EAB 1997) (rejecting suggestion that permit requirement was more burdensome than requirements imposed on similar facilities because a disparity in permit terms by itself is "legally irrelevant"). Only if a petitioner can establish that the circumstances for two facilities were essentially indistinguishable, which the City has failed to do here, would the permitting authority need to show a supportable basis for the disparity.

Likewise, there is no obligation to consider attenuation when establishing effluent limits in permits. Contrary to the City's assertions, section 122.44(d)(1)(ii) does not require the permit issuer to account for attenuation. As a matter of fact, section 122.44(d)(1)(ii) does not speak of attenuation, it speaks of dilution.[49] In addition, the provision does not mandate consideration of dilution at all times, it only requires that the permit issuer consider dilution "where appropriate." Moreover, this provision does not apply to the calculation of effluent limits. The provision only imposes an obligation to consider dilution, "where appropriate," when the permitting authority is determining "whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard." 40 C.F.R. § 122.44(d)(1)(ii). The "cause or contribute" determination is different than the determination of an effluent limitation. Thus, the City's reliance on this

[49] The City uses the terms dilution and attenuation interchangeably, but, while related, these are different concepts. Dilution refers to making a substance less concentrated by adding an inert substance. *See* Webster's Third New International Dictionary 633 (unabridged 1993). In this case, dilution refers to the reduction of nitrogen concentration in the receiving waters that occurs with additional stream flow. Attenuation, for its part, refers to the loss of nitrogen between the point of discharge and the point of impact caused by biological uptake.

provision for the proposition that the permit issuer must adjust effluent limits to account for attenuation is mistaken.

Neither the limits imposed on Rhode Island facilities nor attenuation were the driving factors in the imposition of Attleboro's limit, as the City erroneously believes. The record shows that the following factors played a central role in the imposition of the nitrogen limit, including: (1) the severe cultural eutrophication of the receiving waters, *see* RTC at 7, 13; (2) the tendency of nutrients to accumulate and recycle in the water column, *id*. at 9; (3) Attleboro's contribution to the impairment, *id*. at 7, Attachment 11; (4) the conclusion that of the various loading scenarios available under the MERL model, a concentration-based limit of 8 mg/l was found to be necessary to address the excessive loadings from the Facility, *id*. at 11-12; and (5) RIDEM's assertion that limits as low as the limit of technology may be necessary to achieve its water quality standards, *id.* at 13. Contrary to the City's suggestion, the Region compared the limits imposed on Rhode Island facilities with Attleboro's limit only as additional support for the permit limit, not as the sole basis of the limit. *See id.* at 13 (Response #A.1) (noting that EPA regarded Rhode Island's position as additional evidence that the limit was reasonable). Specifically, the Region compared the Rhode Island and Attleboro's permit limits to show why the limit chosen for Attleboro was not unreasonable and why a more stringent effluent limit was not necessary. *See id.* at 12 (Response #A.1). Thus, the City's suggestion that Rhode Island's approach to nutrient permitting drove the selection of the effluent limit in this case without consideration of the impacts of the Facility in the receiving waters is inaccurate, and does not provide a basis for review.

In addition, we are not persuaded by the City's tabular comparison that Attleboro has been assigned a more stringent limit than the facilities located in Rhode Island. The analysis the City provides to support its position is substantially flawed. To begin with, the table the City provides compares facilities that discharge not only to the Seekonk River, but to other Rhode Island waters.[50] Since the record shows that the Seekonk River is the portion of Upper Narragansett Bay that is most severely impaired,[51] it strikes us that the better comparison would be one that compares the contributions of dischargers into the same water body, in this case the Seekonk River, not all Rhode Island waters.[52]

The City assumes that all the facilities listed in its table discharge directly into either the Seekonk River or other Rhode Island waters. As the Region ex-

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[50] *See supra* note 45.

[51] *See* Fact Sheet at 11.

[52] Indeed, this is the approach the Region adopted in assessing the reasonableness of the limit. *See* RTC Attachment 11; *supra* note 48.

plains, the City's tabular comparison of limits is not accurate because it does not account for attenuation at the Rhode Island facilities. Region's Resp. at 59. That is, the City's analysis showing its "effective" nitrogen discharges takes into account attenuation when estimating discharges into the Seekonk River from the Attleboro Facility, but assumes no attenuation for the facilities located in Rhode Island. *See* City's Petition at 16 (Table). For the comparison to be accurate, as the Region explains, the nitrogen contributions of the Rhode Island facilities must be discounted by the applicable attenuation rates.[53] *See* Region's Resp. at 60.

In particular, the Woonsocket facility in Rhode Island discharges into the Blackstone River, which then flows into the Seekonk River. If one were to use the City's analysis (i.e., multiplying permit limit by river delivery factor by percentage of total nitrogen load to the receiving water body),[54] it is likely that Woonsocket's "effective contribution," as conceived by Attleboro, will be similar to or even less than those calculated for Attleboro,[55] particularly because the record shows that the Woonsocket facility was assigned a permit limit of 5 mg/l, not 8 mg/l as the petition erroneously states.[56] As the Region noted in the RTC, larger

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[53] While the specific percentage of nitrogen contribution into the Ten Mile River seems to be secondary to the issue the City raises – that the limit chosen (8 mg/l) places a disproportionate burden upon Attleboro's nitrogen contribution compared to Rhode Island facilities – we, nonetheless, think that it is appropriate to make the following observation. The City raised this same argument during the public comment period, which the Region addressed explaining why the 70% nitrogen contribution the City estimated is not accurate. RTC at 30-32 (Comment & Response # B.2.b) (explaining that the estimates of the relative nitrogen loading the City cites are based on annual average loading that underestimates the relative contribution of the Facility during summer conditions); *id.* at 20 (Response #A.3.a) (noting that "[t]he commenter's calculation of the concentration of total nitrogen discharged to the Seekonk River from the Attleboro facility [i.e., 70%] is based on an incorrect calculation of attenuation * * * "). The City, however, does not substantively confront this response in its petition. We, thus, have no basis to question the Region's determination.

[54] *See* City's Petition at 16 (using the following method to calculate "effective contributions": 8 mg/l (permit limit) x 60% (river delivery factor) x 70% (% of total nitrogen load)).

[55] For instance, if one were to apply the same formula the City applies, even under the most conservative scenario where Woonsocket's wastewater treatment effluent represents 100% of the total nitrogen load into the Blackstone River, the "effective contribution" of this facility would be 4.35 mg/l (5 mg/l x 87% x 100%). Compared to 4.3 mg/l from Attleboro, Woonsocket's "effective contribution" would be about the same. This number in reality should be lower since Woonsocket's contribution to the Blackstone River is in all likelihood less than 100%, considering that Woonsocket is not the only POTW discharging into that water body and in fact is the smallest of those POTWs. Even though the number stemming from our calculation may not be accurate in that it overestimates Woonsocket's "effective contribution," it serves to illustrate why we are not persuaded by the City's analysis that the "effective contribution" from Attleboro is more stringent than those of Rhode Island facilities.

[56] The record shows that at the time the Attleboro permit was issued, the Woonsocket facility had been assigned a nitrogen limit of 5 mg/l. *See* RTC at 13 (noting that "[b]oth EPA and RIDEM have established or proposed nitrogen limits of 5.0 mg/l for facilities contributing the largest amount of nitrogen to the upper reaches of the Seekonk River system * * * . These include one facility in

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facilities discharging into the Seekonk River (i.e., Upper Blackstone, Woonsocket, and NBC-Buckling Point) are subject to more stringent effluent limits than Attleboro. RTC at 20 (Response #A.3.a). Those facilities are subject to 5 mg/l. Finally, we are not persuaded that a table comparing concentrations is the best tool to compare contributions of different facilities into an impaired water since actual nitrogen loads discharged under the same effluent concentrations may differ from facility to facility based on discharge flows.[57]

Thus the City's attempt to show that Rhode Island facilities are allowed higher nitrogen contributions in Rhode Island waters is fatally flawed. In addition, the City's attempts to undermine the Region's determination that it was not appropriate to reduce the nitrogen limit based on attenuation are also ineffective. None of the arguments the City raises convince us that the Region clearly erred or abused its discretion. As noted above, the permit issuer has no obligation to reduce permit limits based on attenuation. Similarly, the argument that the Region does not have enough information to assume a "simple relationship" between future phosphorus reductions and attenuation in light of the Region's alleged "concession that '[p]hysical conditions such as stratification, temperature, tidal stage, wind[-]induced mixing and re-aeration can affect the system,'" falls short of showing clear error in the Region's decision not to reduce the nitrogen limit. The Region explains that the factors the City cites "relate to processes in the marine Seekonk and Providence Rivers, where nitrogen impacts predominate, rather than the freshwater Ten Mile River, where phosphorus impacts predominate." Region's Resp. at 58. The City does not respond to this explanation or provide any other argument to undermine the Region's determination. In our view, the record clearly explains why the Region expects future reductions in attenuation and we have found no "inherent contradiction," in the record as the City claims.

Since the permitting authority has no obligation to impose permit limits based on parity, and has no obligation to reduce permit limits based on attenuation, and the City has failed to show that the Region abused its discretion, we decline to review the permit on these bases.

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Massachusetts [Upper Blackstone] * * * and two facilities in Rhode Island [NBC-Bucklin Point and Woonsocket]") (Response #A.1); *id*. at 19 (using 5 mg/l for Woonsocket in its table comparing effective contributions) (Comment #A.3.b); *see also* Region's Resp. at 60 n.19 (noting that the City's petition wrongly states that Woonsocket was assigned a limit of 8 mg/l, instead of 5 mg/l).

[57] The Region's analysis comparing mass load, *see* RTC Attachment 11, strikes us as a better tool to compare the contribution of different facilities. Instead of estimating "effective contributions" expressed in concentrations (i.e., mg/l), as the City does, the Region calculated the estimated *amount* of nitrogen, in mass units per day (i.e., kg/day), that each facility that discharges into the Seekonk River would contribute at 90% of their design flow.

(2) *Whether the Nitrogen Limit is Necessary to Meet Rhode Island Standards*

Another argument the City raises is that Rhode Island itself has postponed application of the limits for its in-state dischargers. *See* City's Petition at 17-18. To support this assertion, the City makes reference to two consent agreements between RIDEM and two Rhode Island POTWs, where RIDEM allegedly allows the facilities to have a test period to see if the plants can meet their 5 mg/l permit limit. *Id*. The City claims that the consent agreements allow the Rhode Island facilities to potentially avoid ever having to meet the 5 mg/l limit. *Id*. at 18. According to the City, this shows that the limits in RIDEM's permits are not requirements of an affected state and, therefore, the proposed limit for Attleboro is not required to meet actual limits of the downstream state. *Id*. at 18.

The City raised the same arguments during the public comment period, to which the Region responded. RTC at 20-24 (Comment & Response #A.3.b). Among other things, the Region explained why the Rhode Island limits are not illusory, as the City claimed, and why the Attleboro limits are required to meet Rhode Island water quality standards. More specifically, the Region explained that: (1) the permit limits imposed on Rhode Island facilities are fully enforceable legal obligations on the permittees; (2) the fact that the facilities reserved the right to contest future permit limits has no bearing on the establishment of an appropriate limit for Attleboro; (3) the Region does not expect that future limits on those facilities will be less stringent considering the impaired conditions of the Providence and Seekonk Rivers; (4) the consent agreements require completion of major upgrades and optimization of operations as soon as possible in order to achieve the permit's nitrogen limit; (5) EPA imposed the nitrogen limit on Attleboro because it independently determined that the limit was necessary under applicable water quality requirements in Rhode Island; and (6) the Region anticipates establishing a schedule for Attleboro that, like the consent agreements the City cited, will provide for interim limits to allow for the upgrading and a further period after completion of the upgrades to fine-tune operations before compliance with final permit limits is required. RTC at 23 (Response #A.3.b).

On appeal, the City does not address the Region's response in full. It only takes issue with the part of the response that stated that the permit limits imposed on Rhode Island facilities are fully enforceable legal obligations on the permittees, claiming that the Region "elevates form over substance * * * because the enforcement has already occurred and consent decrees now govern the actual levels in the actual discharge[s] * * * ." City's Petition at 18. Our analysis follows.

Other than challenging the Region's response regarding the enforceability of the permit limits of these two Rhode Island facilities, the City simply reiterates

comments raised below without fully addressing the multi-tiered response the Region provided. The City's attempt does not provide a basis for review.

With respect to the one aspect of the Region's response that the City does challenge, the fact that Rhode Island may have agreed to delay compliance with limits at these two facilities does not change the permit limit for those facilities. As the Region explained in the RTC, the agreements require completion of major upgrades in order to achieve the permit's nitrogen limits. *See* City's Petition Exs. 6a & 6b, ¶ 11. In fact, the facilities are subject to penalties if they fail to comply with any of the interim limits or schedules set forth in the agreements. *Id*. ¶¶ 9-10. Establishment of a schedule with interim limits does not in itself undermine the limit ultimately required to be attained.

In any event, and more fundamentally, the manner in which Rhode Island has elected to handle compliance with effluent limits at these two facilities has no bearing on the establishment of an appropriate limit for Attleboro, and provides no basis for the conclusion that the limit for Attleboro is not required to meet Rhode Island water quality standards. Rhode Island's decision to address compliance of permit limits through the use of consent agreements is irrelevant to the question of whether the Region had a rational basis to impose the permit limit in this case. As noted in the previous section, the record here shows that the Region determined that reductions in nitrogen are required to meet water quality standards in Rhode Island. In responding to Attleboro's comments that the proposed limits "are not required to meet the actual limits of the downstream state," the Region explained:

> The "requirements" of state law do not refer to the individual permit limits proposed by RIDEM for various facilities, but instead to the underlying laws and regulations on which those limits are based. EPA is imposing the nitrogen limit on Attleboro because it independently determined the limit was necessary under applicable water quality requirements in Rhode Island[.]

RTC at 23. The City does not address this response in its appeal. As noted earlier, a petitioner may not simply reiterate comments made during the public comment period, but must substantively confront the permit issuer's subsequent explanations. *Peabody*, 12 E.A.D. at 33.

Moreover, section 301(b)(1)(C) requires each point source to achieve effluent limitations necessary to meet water quality standards and does not make allowances for failure of other sources to comply. *In re Blue Plains Sewage Treatment Plant*, 1 E.A.D. 531, 540 (Adm'r 1979). Since the Agency has an independent duty under the CWA to impose effluent limitations that will ensure

compliance with applicable water quality standards,[58] we are not persuaded that the arguments the City raises warrant granting review.[59]

As a final matter, we reject the City's argument about the Region's alleged failure to consider "the major cause of the impairment [removing the Turner Reservoir]."[60] Interestingly, the City raises this argument as part of its challenges to the nitrogen limit. *See* City's Petition at 15. However, our review of the record shows that in comments below this argument was raised in the context of the phosphorus limits. *See* RTC at 72-73 (Comment #F.6); *id*. at 88. Therefore, to the extent that the City raises this argument as a challenge to the nitrogen limit, review of the issue is denied for failure to preserve the issue for Board review. *See, e.g.*, *In re Scituate Wastewater Treatment Plant*, 12 E.A.D. 708, 724 (EAB 2006) (denying review of certain arguments for failure to raise arguments during public comment period); *In re Arecibo Reg'l Wastewater Treatment Plant*, 12 E.A.D. 97, 120-22 (EAB 2005) (same).

Likewise, we deny review of the argument to the extent that it may have been intended as a challenge to the phosphorus limit.[61] Notably, the City does not elaborate on this argument or explain how or why the phosphorus limit in this case would be less stringent if the Agency had considered removing the Turner Reservoir in its analysis. As noted in several occasions in this decision, mere allegations of error are not sufficient to support review of a permit condition. A petitioner must support its allegations with evidence that demonstrates clear error. In addition, the City merely reiterates similar comments raised below without addressing the Region's response, which also constitutes a basis for denying Board review. In particular, in responding to Attleboro's allegations that the Turner Reservoir is the cause of any exceedances, *see* RTC at 73 (Comment #F.6), the Region explained that such speculation is not a "license for the Attleboro discharge to continue unabated[,]" and that "[f]rom a permitting perspective, the relevant

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[58] *See, e.g.*, *Dominion Energy*, 12 E.A.D. at 631-33.

[59] As noted above, the City claims in general that Rhode Island has postponed application of the limits for its in-state dischargers. To the extent this is intended as an equity argument, we decline review of the permit on this basis. The Region has committed to establishing a schedule for Attleboro, similar to the consent agreements the City cites, to allow Attleboro time to meet the new limit. *See* Fact Sheet at 6 ("The City will likely be unable to immediately comply with the limits proposed for nitrogen and phosphorus. EPA will work with the City and its representatives to develop a schedule for the planning, design, and construction of facilities that may be necessary to meet the specified limits. It is EPA's intent to begin this process as soon as possible."). We, thus, do not see how the City can claim that it is being treated differently than Rhode Island facilities, as it too will be subject to a schedule before compliance with the effluent limit is required.

[60] While the City lists this as one of the alleged errors committed by the Region, it provides no further discussion of the issue in the Petition.

[61] While we discuss phosphorous-related issues later in this decision, *see infra* Part IV.B.2., we include this discussion here since it is incident to the City's allegation of errors as to the nitrogen limit.

fact is that the receiving water is being further impaired by point source phosphorus contributions from the Attleboro [POTW] and this loading must be controlled sufficiently in order to protect the designated uses assigned to the water body by Rhode Island." *Id.* at 76 (Response #F.6). The City does not explain why the Region's response to its comment is clearly erroneous. Similarly, when the same argument (i.e., removal of the dam) was raised in Massachusetts Section 401 Certification, the Region explained:

> EPA's authority under the NPDES program is limited to imposing reasonable limits and conditions related to the point source discharge that will, among other things, ensure compliance with applicable water quality standards of all affected states. EPA has carried out its responsibility in this regard by imposing a phosphorus effluent limit on the Attleboro facility. EPA cannot mandate removal of a downstream dam through an NPDES permit as a means to achieve compliance with standards. In this instance, questions regarding the desirability and feasibility of dam removal would appear to fall primarily within the ambit of Massachusetts and Rhode Island rather than EPA. As MassDEP is aware, portions of the downstream impoundments are in fact in Massachusetts and appear on the state's 303(d) list as impaired for nutrients. While MassDEP observes that it may take many years to fully restore uses in the downstream impoundments even with the new phosphorus limits, this in EPA's view is all the more reason to expeditiously proceed with placing necessary controls on dischargers in the watershed that are contributing to the impairment.

RTC at 88. However, the City fails to address this response as well.

In light of these flaws we deny review of the nitrogen limit on the bases the City propounds.

(ii) *Challenges Related to Cost*

The City's petition also raises concerns about the cost of compliance. *See* City's Petition at 14 (claiming that the permit imposes unnecessary, severe and costly limits). Such concerns, however, form no basis for review. Claims of cost or technological infeasibility have consistently been rejected by this Board as a basis for review. *See, e.g.*, *City of Moscow*, 10 E.A.D. at 168; *In re Town of Maynard*, NPDES Appeal No. 01-05, at 9 (EAB May 18, 2001) (Order Denying Review); *In re Town of Hopedale*, NPDES Appeal No. 00-04, at 24 (EAB Feb. 13, 2001) (Order Denying Review). The Board has often emphasized that the legal

standard is that cost and technological considerations are not factors in setting water quality-based effluent limits. Rather, section 301(b)(1)(C) of the CWA requires unequivocal compliance with applicable water quality standards, and does not recognize an exception for cost or technological infeasibility. *See New Eng. Plating*, 9 E.A.D. at 738 ("In requiring compliance with applicable water quality standards, the CWA simply does not make any exceptions for cost or technological feasibility."). We, thus, reject this claim as a basis for review.

2. *Phosphorus Limits*

a. *Background*

The Permit limits total phosphorus in Attleboro's discharges to a monthly average of 0.1 mg/l (from April 1 through October 31) and 1.0 mg/l (from November 1 through March 31).[62] Permit at 2-3. In the first draft permit, the Region proposed a higher phosphorus limit for the active aquatic plant growth season (also referred to by the parties as the summer season), which takes place during the months of April through October. The first draft permit proposed a limit of 0.2 mg/l based on Massachusetts' "highest and best" practicable treatment requirement. *See* RTC at 51 (Response #F.1). However, after receiving and considering comments from RIDEM showing that impacts from Attleboro's discharges on attainment of Rhode Island's numeric criteria for total phosphorus in lakes had not been adequately considered, the Region decided to re-notice the draft permit for public comment to address this issue.[63] *See id*. Persuaded by RIDEM's analysis that the proposed 0.2 mg/l was not sufficiently stringent to ensure that water quality standards would be met in one of Rhode Island's lakes, the Region recalculated the summer limit for phosphorus and concluded that 0.1 mg/l was necessary to meet both Massachusetts and Rhode Island water quality standards. *See id*. at 51-52.

In establishing the phosphorus limits the Region considered, among other things, the current conditions of the receiving waters both in Massachusetts and Rhode Island,[64] state water quality standards, and the discharges' potential to

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[62] The prior permit had a monthly average limit of 1.0 mg/l and a daily maximum limit of 1.5 mg/l from May 1 to October 31. *See* Fact Sheet at 7.

[63] The proposed winter limit in the first draft permit (i.e., 1.0 mg/l applicable from November 1 through March 31) did not change. While the City states that it contests the winter limit, City's Petition at 19, it makes no specific arguments as to that limit and thus we reject the nominal challenge to that limit.

[64] *See* RTC at 55 (Response #F.1) (explaining that "the segment of the Ten Mile River into which Attleboro discharges, as well as waters downstream of the discharge, are currently suffering from severe phosphorus-driven impairment and are clearly violating applicable water quality criteria in both Massachusetts and Rhode Island").

cause or contribute to exceedances of Massachusetts and Rhode Island water quality standards. *See* RTC at 52-58 (Response #F.1). Central to the issues raised in this appeal are the Region's determination that Attleboro's discharges have a reasonable potential to cause or contribute to exceedances of Massachusetts and Rhode Island water quality standards, and the Region's application of state water quality standards and guidance documents to derive the summer limit.[65]

Consideration of state water quality standards for phosphorus presented similar challenges to those the Region faced when considering nitrogen standards. For instance, Massachusetts has narrative criteria for nutrients, applicable to all surface waters, but it does not have a numeric criterion for total phosphorus. Massachusetts narrative criteria provide that "unless naturally occurring, all surface waters shall be free from nutrients in concentrations that would cause or contribute to impairment of existing designated uses * * * ." 314 Mass. Code Regs. 4.05(5)(C).

Because Massachusetts does not have a numeric criterion for phosphorus, the Region followed 40 C.F.R. § 122.44(d)(1)(vi) and considered "a wide-range of materials, including nationally recommended criteria, supplemented by other relevant materials, such as EPA technical guidance and information published under [s]ection 304(a) of the CWA, peer-reviewed scientific literature and site[-]specific surveys and data." RTC at 57 (Response #F.1). The 1986 *Quality Criteria of Water* ("*Gold Book*"), was among the guidance documents the Region considered. *Id*. at 57-61.

Rhode Island, for its part, has both numeric and narrative criteria. Of particular interest in this appeal is the standard applicable to "lakes, ponds, kettleholes and reservoirs," which provides in pertinent part: "Average Total Phosphorus shall not exceed 0.025 mg/l in any lake, pond, kettlehole or reservoir, and average Total P in tributaries at the point where they enter such bodies of water shall not cause exceedance of this phosphorus criteria." 12-190-001 R.I. Code R. § 8.D.(2).

Based on applicable state narrative and numeric criteria and the reference materials noted above, the Region "determined that an ambient phosphorus concentration of 0.1 mg/l would be necessary to control the effects of cultural eutrophication and to ensure compliance with applicable narrative and numeric nutrient criteria in both Massachusetts and Rhode Island." RTC at 61 (Response #F.1). More specifically, the Region considered various guidance documents suggesting criteria for the control of phosphorus and decided to follow the values recommended in EPA's *Gold Book*, which recommends in-stream phosphorus

[65] The City does not contest that a more stringent limit than the one in the 1999 permit is required but does argue that the 0.1 mg/l limit is overly restrictive. City's Petition at 19.

concentrations not greater than 0.1 mg/l for streams not discharging directly to lakes or impoundments.

Once it selected 0.1 mg/l as the level necessary to assure compliance with both Massachusetts and Rhode Island standards, the Region analyzed the Facility's "potential to cause or contribute to exceedances"[66] of that concentration and concluded that the discharge of total phosphorus from the Facility had such potential. *Id*. The Region arrived at this determination using low flow conditions known as 7Q10,[67]on the basis that Massachusetts and Rhode Island require water quality standards to be met during periods of critical low flow. *See id*.; *see also* Region's Response at 11 (citing 314 Mass. Code Regs. 4.03(3) and 12-190-001 R.I. Code R. § 8.E.).

After determining that Attleboro's discharges had a potential to cause or contribute to exceedances of the target concentration, the Region calculated the effluent limit necessary to achieve the desired in-stream concentration. *See* RTC at 64 (Response #F.2). Using the equation shown on page 64 of the RTC, the Region concluded that the limit should be equal to the target concentration, that is 0.1 mg/l. *Id*. This determination is central to the issues raised in this appeal.

b. *Discussion*

The City challenges the Region's determination that a phosphorus limitation of 0.1 mg/l is necessary to assure compliance with Rhode Island and Massachusetts water quality standards. In support of its challenge, the City raises various arguments that can be categorized into two main groups: arguments related to the reading of state water quality standards and arguments related to the technical determinations the Region made. *See* City's Petition at 19-28. With respect to the former, the City broadly alleges that the phosphorus limit is based on an incorrect reading of state water quality standards and guidance documents. *Id.* at 20-23. As to the latter, the City contends that the limit is based on erroneous assumptions and technical determinations. *Id*. at 23-28. We address each of these arguments in detail below.

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[66] The rules governing issuance of NPDES permits require the permitting authority to determine whether permitted discharges "have the reasonable potential to cause, or contribute to" violations of applicable state water quality standards. 40 C.F.R. § 122.44(d)(1)(i).

[67] This flow condition represents the lowest average seven consecutive day low flow with an average recurrence frequency of once in ten years, hence 7Q10. *See* Region's Resp. at 11 (citing 12-190-001 R.I. Code R. § 8.E.).

c. *Whether the Region Misread State Water Quality Standards & Guidance Documents*

First, the City claims that the Region misinterpreted the "plain language" of Rhode Island water quality standards, wrongly concluding that the Turner Reservoir is a "lake," and that the phosphorus limit should be established using 7Q10 data. City's Petition at 19. Our discussion below begins with our analysis of whether the Region erred in concluding that the Turner Reservoir is a "lake."

(i) *Whether the Region Erred in Determining that the Turner Reservoir is a "Lake"*

As noted earlier, the Ten Mile River is studded by several impoundments, one of them being the Turner Reservoir. The Region determined that the discharge of total phosphorus from the Facility has the potential to cause or contribute to exceedances of applicable water quality standards in Rhode Island waters, including this particular impoundment. The Region also determined that the Turner Reservoir is a lake, and therefore in identifying the applicable criteria and calculating the effluent limit for Attleboro, the Region considered Rhode Island's water quality criteria for "lakes, ponds, kettleholes and reservoirs."[68]

The City disagrees with the determination that the Turner Reservoir is a lake. It argues that the Turner Reservoir does not meet the definition of "lake" provided in *EPA's Nutrient Criteria Technical Guidance Manual: Lakes and Reservoirs* (First Ed.). City's Petition at 20-21. EPA's guidance document defines "lakes" as "natural and artificial impoundments with a surface area greater than 10 acres and a mean water residence time of 14 or more days." Region's Resp. Ex. 23 at 3-1. The City claims that the Turner Reservoir does not meet this definition because the "mean water residence time" of this impoundment is only 9.68 days, and, therefore, the reservoir is not subject to Rhode Island's water quality standard for lakes. *See* City's Petition at 20.

The City raised these arguments during the public comment period. *See* RTC at 79 (Comment #F.7). Providing two separate grounds for its determination, the Region explained why the City's approach was not appropriate in this case. First, the Region noted that RIDEM calculated residence time based on "7Q10 flows" instead of "mean water residence," and under 7Q10 conditions, the reservoir has a retention time of about 42 days. RTC at 75 (Response #F.6). Second,

[68] The limit for phosphorus was based not only on considerations regarding compliance with Rhode Island water quality standards, but also on considerations regarding compliance with Massachusetts narrative criteria. The City challenges the Region's determinations regarding compliance with the standards of both states. This section of the decision deals with the challenges related to Rhode Island standards. Later we address the challenges related to compliance with Massachusetts standards.

noting that hydraulic retention time is neither in Rhode Island's definition of "lake, pond, or reservoir," nor in the numeric criteria established for "lakes, ponds, kettleholes and reservoirs," and that RIDEM has allegedly identified the Turner Reservoir as an impaired lake in its section 303(d) list of impaired waters, the Region concluded that the Turner Reservoir is a lake under RIDEM's regulations as well.[69] *Id*.

On appeal, the City takes issue with the Region's sanctioning of RIDEM's use of 7Q10 flows to determine whether the reservoir is a lake under EPA guidance, and with the Region's reliance on Rhode Island's definition of "lake, pond, or reservoir" as further support. *See* City's Petition at 22. With respect to the use of 7Q10, the City argues that such use contravenes the meaning of "mean."[70] With respect to the use of Rhode Island's regulatory definition of lake, the City argues that this definition is not controlling. According to the City, the definition provided in EPA's guidance document is the one that controls the issue here. *See id*. at 20. The City claims that EPA guidance is controlling because in its comments during the public comment period, RIDEM relied on the definition set forth in the guidance document to demonstrate that the Turner Reservoir is a lake, instead of

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[69] The Region articulated its reasoning as follows:

> Notwithstanding the different calculations of retention time, the Rhode Island water quality standards do not include or reference the EPA definition of lake in its definition of "lake, pond, kettle[hole], or reservoir." The RI standards define a "lake, pond or reservoir" as "any body of water, whether naturally occurring or created in whole or in part, excluding sedimentation control or stormwater retention/detention basins, unless constructed in waters of the State," and require that the "average Total Phosphorus shall not exceed 0.025 mg/l in any lake, pond, kettlehole or reservoir, and average Total P in tributaries at the point where they enter such bodies of water shall not cause exceedance of this phosphorus criteria * * * ." Hydraulic retention time is not in the definition of lake, pond, kettle[hole], or reservoir, nor in the numeric criteria established for lakes, ponds, or reservoirs. In addition, RIDEM has identified Turner Reservoir as an impaired lake in its 303(d) list of impaired waters (Waterbody ID RI0004009L-01B). Therefore, EPA has concluded that it is a "lake, pond, kettle[hole] or reservoir" within the meaning of the Rhode Island's water quality standards and subject to the numeric water quality criteria for phosphorus.

RTC at 75 (Response #F.6).

[70] In addition to arguing against the use of 7Q10 conditions to determine whether the Turner Reservoir is a lake, the City makes two other arguments regarding the use of 7Q10 flows. On page 21 of its Petition, the City argues against the use of 7Q10 conditions to calculate the permit limit for phosphorus. We address this argument in Part IV.B.2.c.ii. of this decision. In addition, on page 33, the City argues that it was not aware that RIDEM had calculated retention time based on 7Q10 flows. This argument is addressed in this part of the decision.

relying on its own regulations. *Id*. (citing RTC at 42). The City adds that RIDEM's definition is too broad and that its application is erroneous. *See id*.

Upon consideration of the issues we find no clear error in the Region's determination that the Turner Reservoir is subject to the Rhode Island criterion applicable to "lakes, ponds, kettle[holes] or reservoirs." Contrary to the City's suggestions, the relevant question here is whether the Turner Reservoir falls under Rhode Island's regulatory definition of "lake, pond, or reservoir." Controlling here are Rhode Island water quality standards and not EPA's guidance document, as the City claims. Thus, we find the Region's discussion of the EPA guidance in the RTC and Response extraneous and need not address it.

The permit issuer's obligation is to ensure that the permit contains effluent limitations and conditions that comply with state water quality standards of all affected states, not EPA's guidance. *See* CWA §§ 301(b)(1)(C), 401(a)(2), 33 U.S.C. §§ 1311(b)(1)(C), 1341(a)(2); 40 C.F.R. §§ 122.4(d), .44(d)(4); *see also City of Moscow*, 10 E.A.D. at 165 (stressing that federal permits are required to meet state water quality standards). Unlike regulatory provisions, such as Rhode Island's standards, guidance documents are not legally binding.[71] However, even if we were to agree with the City that EPA's guidance document is controlling here, which we do not, the guidance document itself defers to state standards when it comes to legal definitions. The guidance document states that the "definitions are provided for the purpose of illustration and consistency. *States with legal definitions of their lakes or reservoirs should obviously adhere to their own terms and interpret this guidance accordingly*." Region's Resp. Ex. 23 at 3-2 (emphasis added). The fact that RIDEM opted in its comments to illustrate its point by applying a definition contained in EPA's guidance document may have created some confusion, but it does not provide a basis for the Region to ignore the Rhode Island standards defining the term "lake." RIDEM confirmed at oral argument that it has "always interpreted [the Turner Reservoir] to be a lake," and that its regulations "treat lakes and reservoirs the same for purpose of the criteria." Tr. at 10-12.

Rhode Island's definition of the terms "lake, pond or reservoir" encompasses "any body of water, whether naturally occurring or created in whole or in part, excluding sedimentation control or stormwater retention/detention basins, unless constructed in waters of the State." 12-190-001 R.I. Code R. § 7. Notably, this

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[71] While guidance documents are valuable tools in aiding the Agency's deliberative processes where regulations may lack details about their implementation, they do not confer any rights nor are they binding. *See, e.g.*, *In re Cardinal FG Co.*, 12 E.A.D. 153,162 (EAB 2005) (noting that guidance document used by Agency in determining Best Available Control Technology under the Prevention of Significant Deterioration permitting program is not a binding Agency regulation and, as such, strict application of the methodology described in the guidance document is not mandatory); *In re Wyoming Refining Company*, 2 E.A.D. 221, 225 (Adm'r 1986) (explaining that internal documents do not confer any substantive or procedural rights upon the public).

definition does not reference EPA's guidance document or hydraulic residence time, and RIDEM confirmed at oral argument that its definition does not include residence time.[72] *See* Tr. at 82.

The Turner Reservoir does not seem to fit into any of the exclusions the regulation identifies, but does fit into the description provided (i.e., "any body of water, whether naturally occurring or created in whole or in part"). As noted above, the City claims that this definition is too broad and should not be applied, suggesting that application of this rule would encompass streams, rivers, brooks, or flowing impoundments. *See* City's Petition at 22. We are not persuaded by the City's argument. To disregard Rhode Island's regulation on the basis the City propounds would contravene basic canons of statutory construction[73] requiring that words be construed in a manner that avoids absurd results.[74] We do not read the description Rule 7 provides as trying to encompass each and every body of water imaginable, but only those water bodies that would reasonably fall under the ordinary meaning of "lake, pond or reservoir," whether naturally occurring or man-made. It is evident that this is the import the Region gave to this provision. There is nothing clearly erroneous or unreasonable in the determination the Region made in this case. Finding that "a 225-acre, slow moving impoundment" falls under the meaning of the words "lake" or "reservoir" does not strike us as absurd or unreasonable.[75] In addition, as noted above, it is clear that RIDEM's intention has been to consider this water body as a lake for the purpose of applying the criteria. In light of all this, we decline to rule against the Region's determination that Rhode Island's criteria for "lakes, ponds, kettle[holes] or reservoirs" applies to the Turner Reservoir.

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[72] Consequently, whether the Region erred in using 7Q10 flows to determine if the Turner Reservoir is a lake, or whether the City was aware that RIDEM had used 7Q10 flows to calculate retention time, is irrelevant. We therefore need not reach these arguments.

[73] *See Rucker v. Wabash R.R. Co.*, 418 F.2d 146, 149 (7th Cir. 1969) (same rules of construction apply to administrative regulations as apply to statutes).

[74] *See, e.g., Pub. Citizen v. U. S. Dep't of Justice*, 491 U.S. 440, 452-55 (1989) (noting that statutes are to be read in a manner that avoids absurd results); *City of Lincoln, Neb. v. Ricketts*, 297 U.S. 373, 376 (1936) (noting duty to give words their natural significance unless that leads to an unreasonable result plainly at variance with the evident purpose of the legislation).

[75] Notably, it falls under the meaning ordinarily given to these terms. The term "lake" is ordinarily defined as "a considerable inland body of standing water, an expanded part of a river, a reservoir formed by a dam, or a lake basin intermittently or formerly covered by water." Webster's Third New International Dictionary 1265 (unabridged 1993). The same dictionary defines the term "reservoir" as "an artificial lake in which water is impounded for domestic and industrial use, irrigation, hydroelectric power, flood control, or other purposes." *Id*. at 1931. According to the record, the Turner Reservoir was constructed in 1930 to form a water supply reservoir for the City of East Providence and used as a water supply until 1969. RTC at 76. The reservoir is currently used for recreational purposes. *Id*. These uses seem to fit the ordinary definition of reservoir, and thus a lake.

(ii) *Whether the Region Erred in Using 7Q10 Conditions to Establish Permit Limits*

The City also questions the use of 7Q10 conditions to determine the seasonal limit applicable during the period of algal growth. Specifically, the City claims that the Region erred in "tying the phosphorus limit to the 7Q10 concentrations in Turner Reservoir," because Rhode Island standard "calls for 'average' concentrations of 0.025 mg/l." City's Petition at 21. The City refers to Rhode Island's water quality criterion for "lakes, ponds, kettleholes or reservoirs," which provides that: "Average Total Phosphorus shall not exceed 0.025 mg/l in any lake, pond, kettlehole or reservoir, and average Total P in tributaries at the point where they enter such bodies of water shall not cause exceedance of this phosphorus criteria." *See* 12-190-001 R.I. Code R. § 8.D.(2). According to the City, "[e]xtreme low flows conditions, such as 7Q10 flows, are not by any stretch 'average' concentrations." City's Petition at 21. To further support its position that Rhode Island's phosphorus rule is not based on 7Q10 flows, the City cites to TMDLs RIDEM has issued for other water bodies. *See id.* The City claims that the TMDLs show that RIDEM has calculated necessary phosphorus load reductions based on "mean annual loads." *Id*.

The City, however, has failed to meet its burden of showing that the Region clearly erred in using 7Q10 flows. The Region addressed the use of 7Q10 flows in the RTC. Noting that "Rhode Island's numeric criterion for lakes and ponds [Rule 8.D.(2)] does not itself set forth the hydrological condition under which the 'average' total phosphorus value of 0.025 mg/l must be met," the Region explained that "under Rhode Island's standards [referring to Rule 8.E.] aquatic life criteria for fresh waters must not be exceeded at or above the 7Q10." RTC at 75 (Response #F.6).

Notably, the City's petition does not address the Region's RTC or explain why the Region's interpretation of, and reliance on, Rule 8.E. is erroneous. As we explained earlier in this decision, a petitioner may not simply reiterate comments raised during the public comment period; it must substantively confront the permit issuer's response to comments. On this basis alone we have rejected review of arguments raised on appeal.

In addition, we do not find clear error in the Region's determination to use 7Q10 flows to calculate the permit limits. As the Region noted, Rule 8.D.(2) does not speak to the hydrological conditions, in this case the flow rate, at which the regulatory phosphorus concentration of 0.025 mg/l must be met. Rule 8.D.(2) speaks only to the average concentration in the applicable water bodies and their tributaries. Concentration and hydrological conditions, such as flow rate, are two different concepts. The former refers to the relative content of a component, which is generally expressed in weight per volume units or parts per million (i.e., mg/l or ppm), while the latter refers to the amount of water that flows over a

period of time, usually expressed in units of volume per time (i.e., ft^3/s). Thus, the fact that a provision establishes that average concentrations in a water body shall not exceed a certain parameter does not necessarily imply that the hydrological conditions to be used to translate that number into an effluent limitation must be representative of average annual flows, which is what the City suggests. In this particular case, Rhode Island has spoken to the applicable hydrological conditions under which its water quality standards must be met. Rule 8.E. requires that water quality standards be met under the "most adverse conditions,"[76] which the Region interpreted as 7Q10 conditions. We find no clear error in this determination, particularly because it is consistent with Rhode Island's rule on ambient water quality criteria, Rule 8.E.(1)(a),[77] which requires compliance during 7Q10 conditions. Likewise, Massachusetts' water quality standards require compliance during "the most severe hydrologic conditions," 314 Mass. Code Regs. 4.03(3), or 7Q10 conditions for rivers and streams.[78] *See id.* at 4.03(3)(a).

As a final matter, we decline review of the argument the City raises regarding RIDEM's use of "mean annual loads" to calculate phosphorus loads, as evidenced in some TMDLs RIDEM has issued.[79] By failing to bring the TMDLs to the permit issuer's attention, the City failed to preserve the issue for Board review. *See* 40 C.F.R. § 124.13 (requiring person who seeks review of a permit decision to have raised "all reasonably ascertainable issues and submit all reasonably available arguments supporting their position" during the public comment period).

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[76] Rule 8.E. provides in pertinent part:

> The water quality standards apply under the most adverse conditions, as determined by the Director according to sound engineering and scientific practices on a case-by-case basis unless defined below.

12-190-001 R.I. Code R. § 8.E.

[77] Rule 8.E.(1) provides in pertinent part:

> (1) The ambient water quality criteria are applicable at or in excess of the following flow conditions:
>
> (a) Aquatic Life Criteria – The acute and chronic aquatic life criteria for freshwaters shall not be exceeded at or above the lowest average 7 consecutive day low flow with an average recurrence frequency of once in 10 years (7Q10).

12-190-001 R.I. Code R. § 8.E.(1).

[78] The applicable Massachusetts standard provides as follows: "For rivers and streams, the lowest flow condition at and above which aquatic life criteria must be applied is the lowest mean flow for seven consecutive days to be expected once in ten years." 314 Mass. Code Regs. 4.03(3)(a).

[79] The City cites two TMDLs issued by RIDEM, one for Spectacle Pond and the other for Sands Pond. However, neither of these water bodies is located on the Ten Mile, Seekonk, or Providence Rivers.

In its reply brief, the City claims that it could not have ascertained the need to introduce those materials given RIDEM's and the Region's use of residence time and average values during the public comment period. City's Reply Brief at 13. We disagree. While it is true that RIDEM looked to EPA's guidance document, which uses residence time to determine whether a water body is a lake, the Revised Fact Sheet makes various references to 7Q10 flows in connection with the phosphorus limits. *See* Region's Resp. Ex. 15 ("Revised Fact Sheet") at 4-5. Therefore, the City's suggestion that the RTC first made it aware that 7Q10s were used in calculating the phosphorus limit is not correct.[80]

In any event, even if these TMDLs show that RIDEM has applied, and EPA has approved, use of longer averaging periods for determining phosphorus loads for other water bodies,[81] this does not demonstrate that the Region clearly erred in using 7Q10 flows to determine effluent limits in this case. As we have noted in other Board cases, the fact that a state may had applied in practice its own standards in a manner less stringent than that contemplated in the applicable standard does not provide a basis for the Region to deviate from the standard in establishing a permit limit. *See City of Moscow*, 10 E.A.D. at 166 (declining to follow state's "as applied" standard and noting that "until such time that [the state] actually changes its water quality criteria * * * the Region has no choice but to apply it"). In addition, these documents do not show how such an approach would be protective of the water quality standards in the waters at stake here. The Region explains that, unlike the Turner Reservoir, there are no permitted wastewater point sources in the Spectacle or Sands Pond TMDL study area that would discharge to the receiving waters under low flow conditions, and thus, low flow does not represent worst case conditions for these type of systems. Region's Resp. at 69 n.25. The Region also maintains that breaking the ongoing cycle of eutrophication in the receiving waters is a priority, and that the use of 7Q10 flows is consistent with the standard as written, and the conservative approach the Region has adopted in nutrient permitting in general. *See id*. at 71-72; *see also* RTC at 64-65 (noting, among other things, why the use of 7Q10 not only meets applicable standards requiring use of low flow conditions, but also ensures compliance with ap-

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[80] The City also claims that the TMDLs are "not the sort of historical or scientific facts that cannot be considered unless in the record." City's Reply Brief at 12 (relying on *Mass. Med. Soc'y v. Dukakis*, 637 F. Supp. 684, 689-94 (D. Mass. 1986)). This case, however, is not on point. The case the City cites distinguishes between historical and evaluative facts, and between adjudicative and non-adjudicative facts. It also discusses the concept of "judicial notice," and the applicability of the rules of evidence to adjudicative and non-adjudicative facts. It is unclear, to say the least, how this case stands for the propositions cited. If the City's intent was to categorize the TMDLs as non-adjudicative facts, the decision only provides dicta as to how a court "is not confined to the record of evidence presented to the trial court" when considering such type of facts. We, thus, find the case the City cites inapplicable.

[81] The Region concedes that in those TMDLs RIDEM calculated residence times based on annual average flow and load reductions based on mean annual loads. Region's Resp. at 69 n.25.

plicable criteria). RIDEM for its part explains that the approach of using 7Q10 flows is appropriate in this case because the Turner Reservoir is an effluent-dominated river impoundment and an impaired water body. Tr. at 9-10, 83. The City, however, has presented no evidence showing that the approach taken in the cited TMDLs is adequate here.

For all the foregoing reasons, we find no clear error in the Region's determination to use 7Q10 flows to derive the phosphorus permit limits. Therefore, review of the permit on this basis is denied.

d. *Alleged Errors in Assumptions and Technical Determinations*

Next, the City challenges some of the assumptions and technical determinations the Region made in deriving the summer phosphorus limit. The City identifies five alleged errors in the derivation of the limit, claiming that: (1) the limit is based on the same errors as the nitrogen limit, City's Petition at 23; (2) the Region failed to establish WLAs,[82] *id*. at 26; (3) the Region improperly used standards derived for seasonal flows to set limits for extreme low flows, *id*. at 23-25; (4) the Region failed to show that the limit is necessary to protect Massachusetts waters, *id*. at 22-23; and (5) the Region improperly ignored dilution or attenuation, *id*. at 19, 25-26. We address each of these arguments below.

(i) *Whether Phosphorus Limits are Based on the Same Alleged Errors as Nitrogen Limits*

The City claims that "the phosphorus limits are arbitrary and capricious because they rely upon the same errors [the same assumptions regarding dilution, modeling and scientific support] as the nitrogen limits." City's Petition at 23. This argument, however, lacks required specificity and does not provide a basis for review. *See New Eng. Plating*, 9 E.A.D. at 737 (noting that "to warrant review allegations must be specific and substantiated"). As previously explained, the burden of showing that review is warranted falls on the petitioner, and the Board will not entertain vague or unsubstantiated claims. *City of Moscow*, 10 E.A.D. at 172; *New Eng. Plating*, 9 E.A.D. at 737; *Hadson Power*, 4 E.A.D. at 294 n.54. Mere allegations of error are not sufficient to support review of a permit condition. Thus, by failing to explain how the alleged errors the Region made with respect to nitrogen relate to the determination of the phosphorus limit, the City has failed to meet its burden of showing that review of the phosphorus limit is warranted based

[82] As noted earlier in this decision, *see supra* note 17, at oral argument the City steered away from the position that WLAs are a precondition to establishing WQBELs, arguing only that they were preferable, not required. Therefore, we need not address the argument the City appears to raise in its petition and reply brief that WLAs are required to determine effluent limitations for phosphorus.

on this argument. *New Eng. Plating*, 9 E.A.D. at 737 (stating that a "petitioner must not only identify disputed issues but [also] demonstrate the specific reasons why review is appropriate"). In addition, the Region claims, and the City does not deny, that the City did not raise this argument in comments below. As previously discussed, petitioners are required to raise all reasonably ascertainable issues during the public comment period, and demonstrate in their petition that the issues they raise on appeal were preserved for Board review. *See* 40 C.F.R. § 124.19(a) (a petition for review must include "a statement of the reasons supporting that review, including a demonstration that any issues being raised were raised during the public comment period").

In light of these procedural flaws, we reject this argument as a basis for review of the phosphorus limits.

(ii) *Use of Standards Allegedly Derived for Seasonal Flows to Set Limits for Low Flows*

Next, the City challenges the Region's use of *EPA's Gold Book* values in connection with 7Q10 flows. City's Petition at 23-25. According to the City, the *Gold Book's* recommended concentration was calculated for seasonal or annual conditions, not 7Q10. Therefore, the City claims, the Region erred in interpreting the *Gold Book* concentration as an instantaneous limit. *See id*. at 23-24. The City also objects to the imposition of a monthly limit instead of a seasonal average, adding that "[i]f EPA wanted to use 7Q10 flows as the basis for a monthly average, then it should have found (and converted to a monthly equivalent) an in-stream value for such flows, instead of using one for seasonal averages." *Id*. at 24-25.

In essence, the City challenges the manner in which the Region applied the 0.1 mg/l concentration to calculate the permit limitation. To the extent that this is a challenge to the Region's interpretation of a technical document, as we have previously stated, the Board gives deference to a permit issuer's determination of issues that depend heavily upon its technical expertise and experience. *In re Envotech, L.P.*, 6 E.A.D 260, 284 (EAB 1996).

Notably, the City points to nothing specific in the *Gold Book* that suggests how *Gold Book* values should be applied. The City's rationale for claiming that the *Gold Book* values should be applied on a seasonal basis is that "it would be ludicrous" to consider the *Gold Book* values as instantaneous, "because any instantaneous exceedance would theoretically violate the standards."[83] *See* City's Petition at 24. In addition, the City makes reference to other technical documents the

[83] This is not the situation here, since the Permit does not impose instantaneous limits; rather, compliance with the phosphorus limit is based on monthly averages.

Region cited in the RTC that allegedly show EPA's practice of using seasonal or annual averaging periods when applying the recommended criteria those guidance documents provide. *Id.*[84]

The Region has provided a sound and reasonable explanation of its application of the *Gold Book* recommended concentration. The record shows that in deciding to use the *Gold Book* values in connection with low flows, the Region considered language in the *Gold Book* stating that phosphorus "should not exceed" specified concentrations.[85] Based on that language, the Region interpreted the *Gold Book* values as instantaneous values, not to be exceeded at any time including during low flow conditions. RTC at 81 (Response #F.8). The Region also considered the fact that several states apply the same value (0.1 mg/l) on an instantaneous basis,[86] and the need for maintaining consistency with the approach the Region has adopted in the context of nutrient permitting, which advocates for a more conservative approach where receiving waters are highly impaired.[87] We find no clear error in these considerations or the decision to use low flow conditions and the recommended *Gold Book* values to determine an effluent limitation for phosphorus. Absent explicit guidance on how to apply the *Gold Book* values, the Region reasonably exercised its judgment. The fact that other guidance docu-

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[84] On page 25 of its petition, while still challenging the use of *Gold Book* values in connection with low flows, the City makes two arguments that appear to bear no connection to the challenge raised under that section of the petition. The City alleges that the Region "resort[ed] to an insupportably low [attenuation] rate [10%] to justify its phosphorus limit." City's Petition at 25 (citing RTC at 77). The City also mentions an October 2007 nutrient bloom the Region cites in the RTC, and alleges that such bloom could not have related to Attleboro's discharges. *Id.*

The first argument seems to relate to the Region's analysis of the impacts of Attleboro's discharges at the inlet of Turner Reservoir. *See* RTC at 77-78. Since the argument bears no connection to the challenges the City raises in this part of the decision, we decline review of this argument. The second argument seems to relate to a reference the Region made on page 56 of the RTC to a September 2007 algae bloom (not October), made for the sole purpose of further supporting the Region's general observations about the impaired conditions of the receiving waters, and not to show a connection between the impairment and Attleboro's discharges. *See* RTC at 56.

[85] In particular the *Gold Book* states:

To prevent the development of biological nuisances and to control accelerated or cultural euthrophication, total phosphates and phosphorus (P) *should not exceed* 50 g/L in any stream at the point where it enters any lake or reservoir, nor 25 g/L within the lake or reservoir. A desired goal for the prevention of plant nuisances in streams or other flowing waters not discharging directly to lakes or impoundments is 100 g/L total P.

Region's Response at 78 (citing *Gold Book* at 240).

[86] *See* Region's Resp. at 78 (citing RTC at 60 and Table 2, which provides examples of numeric criteria and guidelines for total phosphorus in different states of the U.S.); *see also* RTC at 81 n.29.

[87] *See* Region's Resp. at 78 (citing RTC at 13 n.11).

ments may suggest that their recommended criteria be applied on a seasonal basis does not mean that the Region is bound to use the same approach when applying criteria from a different guidance document. In any event, both Massachusetts and Rhode Island require compliance with water quality standards during low flow conditions.

We also do not find the City's objection to the imposition of a monthly limit to be a basis for review. As the Region explained in the RTC, imposition of a thirty-day average limit is consistent with federal regulations governing the NPDES program. *See* RTC at 65 (Response #F.2). Specifically, section 122.45(d)(2) requires all permit effluent limitations from continuous discharges from POTWs to be expressed as "average weekly and average monthly discharge limitations."[88] 40 C.F.R. § 122.45(d)(2). In addition to pointing out consistency with the regulations that govern this Permit, the Region explained that: (1) such an averaging period will reasonably minimize the amount of time that phosphorus effluent concentrations from the Facility can exceed 0.1 mg/l; and (2) such "approach maintains consistently low phosphorus effluent concentrations, and minimizes overall phosphorus loading into the system, which is important in impaired waters, like the Ten Mile River, which are already suffering from severe existing cultural eutrophication and where there may be some potential for the existing sediment phosphorus deposits to recycle in the water column." *See* RTC at 65 (Response #F.2). This analysis strikes us as reasonable and given that the City has not confronted the Region's RTC regarding the imposition of a thirty-day average limit or explained why section 122.45(d)(2) is inapplicable, we see no reason to second-guess the Region's determination.

(iii) *Whether the Region failed to Demonstrate that the Phosphorus Limit is Necessary to Meet Massachusetts Standards*

The City also argues that the Region did not demonstrate that the phosphorus limit is necessary to meet Massachusetts standards, claiming that there is no evidence that the last 200 yards of the Ten Mile River in Massachusetts are affected by the City's phosphorus discharge. City's Petition at 22-23. As evidence that this particular stretch of the Ten Mile River is not affected by the City's discharges, the City points to language in the RTC where the Region noted that phosphorus "may be rapidly transported downstream." *Id*. at 23 (citing RTC

[88] Section 122.45(d)(2) provides in relevant part: "For continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall unless impracticable be stated as: * * * Average weekly and average monthly discharge limitations for POTWs." Establishing a monthly limit also mitigates the City's concern about the allegedly "ludicrous" determination that *Gold Book* values apply on an instantaneous basis.

at 53). The City adds to its arguments that once in Rhode Island, the Ten Mile River is no longer listed for nutrient impairment. *Id*.

The City's argument seems premised on the mistaken assumption that in order to establish effluent limitations, the permitting authority must demonstrate actual impacts to the receiving water body. The applicable regulations, however, do not require such a showing. Pursuant to section 122.44(d)(1)(i), the permitting authority must impose limits on pollutants that "have the reasonable potential to cause or contribute to an excursion above any [s]tate water quality standard, including [s]tate narrative criteria for water quality." 40 C.F.R. § 122.44(d)(1)(i). Therefore, the permitting authority need only show that the regulated discharge has the potential to cause or contribute to violations of the applicable standard.

In this case, after concluding that 0.1 mg/l was the appropriate criterion to follow, *see* RTC at 57-61 (Response #F.1), the Region determined that the available data showed that the discharge of total phosphorus from the Facility has the reasonable potential to cause or contribute to exceedances of this criterion. *Id*. at 61. The Region arrived at this conclusion after calculating the in-stream concentrations of phosphorus in the receiving waters that would result from discharges from the Facility under two different permit conditions: 1 mg/l[89] and 0.2 mg/l.[90] The calculations showed that under both scenarios, even assuming zero background,[91] the in-stream concentration would exceed 0.1 mg/l.[92] The City does not challenge this determination.

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[89] This number represents the effluent limit in the previous permit.

[90] This is the first draft's proposed limit.

[91] The Region estimated in-stream concentrations under both scenarios using zero background concentration, a favorable scenario for Attleboro since it assumes that Attleboro is the only source of phosphorus into the receiving water body, which is not the case. *See* RTC at 61 (Response #F.1).

[92] The following excerpt describes in more detail the Region's approach:

> At its current total phosphorus limit of 1 mg/l and its design flow of 8.6 MGD (13.3 cfs), the Attleboro discharge would, under 7Q10 conditions with an estimated dilution factor of 1.4, cause an in-stream concentration immediately downstream, of 0.7 mg/l (1/1.4), which far exceeds any recommended water quality criterion. This value assumes a background concentration of zero, meaning that the Attleboro discharge on its own would cause this in-stream concentration in the absence of any other sources. At an effluent limit of 0.2 mg/l, the limit proposed in the original draft permit, the treatment plant would result in a downstream phosphorus concentration of about 0.14 mg/l (0.2/1.4), again assuming 7Q10 conditions and zero background of phosphorus. Thus, even when zero background is assumed, which does not reflect actual in-stream conditions, this value also far exceeds any of the recommended criteria.

RTC at 61 (Response #F.1).

In addition, the record shows that: (1) the Ten Mile River is listed on the Massachusetts 303(d) list as impaired for, among other things, nutrients, organic enrichment/low DO, and noxious aquatic plants, from the North Attleborough treatment plant to the Massachusetts/Rhode Island border, which includes Attleboro, RTC at 55 (Response #F.1); (2) Central Pond and James V. Turner Reservoir, parts of which are in Massachusetts, are also on the Massachusetts 303(d) list as impaired due to nutrients and noxious aquatic plants, *id*., Fact Sheet at 5; and (3) the receiving waters are being impacted by further phosphorus loading by the City, RTC at 56 (Response #F.1), *id.* at 64 (Response #F.2).[93]

The Region's comment about how nutrients in general have a tendency to be rapidly transported downstream does not, as the City argues, evidence that Attleboro's discharges do not impact the Ten Mile River. Notably, the comment the City refers to was not specifically made with respect to Attleboro's discharges. In explaining, in general terms, the phenomenon of cultural eutrophication, the Region noted phosphorus' tendency to remain in the water column and/or be transported downstream, and concluded that in establishing phosphorus limits, a permit issuer must take into account downstream impacts of the pollutant. *See* RTC at 53 (Response #F.1). We find no inconsistency with this statement and the determination that Attleboro's discharges have a reasonable potential to cause or contribute to exceedances of the target concentration. As the Region explains, there is nothing inconsistent in demonstrating both that phosphorus from a facility is contributing to eutrophication immediately downstream of the discharge and that a portion of such phosphorus is also transported downstream. *See* Region's Response at 73-74.

Likewise, we are not persuaded by the City's suggestion that the phosphorus limit is not necessary because, once in Rhode Island, the Ten Mile River is no longer listed for nutrient impairment. The record shows that while the free flowing segments of the Ten Mile River in Rhode Island have not been listed for nutrient impairment, waters downstream of the Facility are eutrophic. *See* RTC at 55 (Response #F.1) (noting that the *Massachusetts Ten Mile River Basin 1997 Water Quality Assessment Report* describes Central Pond and the Turner Reservoir as hypereutrophic); *id*. at 56 (noting that in 1999 the U.S. Army Corp of Engineers found the Turner Reservoir to be eutrophic). In addition, in-stream sampling data show that downstream waters consistently exceed the recommended criterion. *See id.* at 56 (noting that "[d]ownsteam of the Attleboro discharge, below the confluence with the Seven Mile River, the Ten Mile also consistently exceeds the [*Gold*

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[93] *See* RTC at 56 (Response #F.1) (explaining that data sampling conducted during the spring and summer of 2002 show that downstream of the Attleboro discharge, the Ten Mile River consistently exceeds not only the *Gold Book* guidance value, but the *Ecoregion* criteria – another EPA guidance document – and other recommended values); *id.* at 64 (Response #F.2) (noting that the Ten Mile River and its impoundments are already highly laden with phosphorus due to past discharges from the North Attleborough WWTF, Attleboro, and other sources).

Book recommended] water quality criteria"); *id*. at 74 n.25 (Response #F.6) ("While the free flowing segments of the Ten Mile River in Rhode Island have not been listed for nutrient impairment, * * * the in[-]stream sampling data indicate phosphorus effluent limits well above the 0.1 mg/l level that EPA has determined to be necessary to control the effects of eutrophication."). This shows the need to impose phosphorus limits. Based on *Gold Book* values, which are similar to Rhode Island's applicable criteria for lakes,[94] the Region concluded that an in-stream concentration of 0.1 mg/l would be necessary and adequate to assure that the Rhode Island numeric criterion of 0.025 mg/l, applicable within the Turner Reservoir, is not exceeded. *Id*. at 57 (Response #F.1), 75 (Response #F.6). We find no clear error in this analysis.

(iv) *Alleged Failure to Account for Dilution and Attenuation in Establishing Phosphorus Limit*

Once the Region determined what concentration level was necessary to assure compliance with water quality standards, it proceeded to calculate effluent limitations. Using the equation set forth on page 64 of the RTC, the Region calculated the summer effluent limitation. *See* RTC at 64 (Response #F.2). The equation used is dependent upon assumptions regarding flow rate and background concentration.[95] In this case, the Region used 7Q10 flow rates and background concentrations taken during the summer months. *Id*. Under those conditions, the effluent limit turned out to be 0.1 mg/l, the same as the target concentration.[96] In

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[94] RTC at 57 (Response #F.1) (noting that *Gold Book* recommends in-stream phosphorus concentrations of no greater that 0.05 mg/l in any stream entering a lake or reservoir, 0.1 mg/l for any stream not discharging directly to a lake or impoundments, and 0.025 mg/l within the lake or reservoir.").

[95] The equation the Region used to calculate the effluent limit is: Cd = (CrQr-CsQs)/Qd.

Where:

Cd = discharge concentration

Cr = downstream concentration (desired criterion)

Qr = downstream flow = Qs + Qd

Qs = upstream flow (7Q10 flow)

Cs = background concentration (based on summer data)

Qd = discharge flow

RTC at 64 (Response #F.2).

[96] Using the formula provided on page 64 of the RTC, and the following assumptions, the Region found the effluent limit (i.e., Cd) to be 0.1 mg/l:

Cr = 0.100 mg/l

Continued

comments below, the City suggested that the Region adjust the effluent limit to account for dilution and attenuation, which would render a less stringent limit than 0.1 mg/l. *See id*. at 63. The Region, however, declined to make adjustments to the effluent limitation based on dilution and attenuation. With respect to dilution, the Region explained, among other things, that the high existing background offsets the amount of available dilution under low flow conditions. *See id.* at 64. With respect to attenuation, the Region explained that phosphorus removed through attenuation is not permanently removed from the environment, that attenuation is expected to decrease in the future, and that while low flow data did show attenuation, data taken during high flows showed minimal attenuation. *See id*. at 67.

The City takes issue with these conclusions, arguing that they are arbitrary and capricious, and makes various arguments in support of its position pointing to alleged errors regarding the Region's consideration of dilution, attenuation, and background concentrations.[97] *See* City's Petition at 25-26. Specifically, with respect to the Region's determination that dilution is low, the City argues that: (1) 40 C.F.R. § 122.44(d)(1)(ii) bars the Region from assuming that there is no dilution or attenuation, *see id*. at 25; (2) the record contradicts the Region's determination, *see id*. at 25-26 (citing parts of the record where the Region allegedly acknowledged that phosphorus is not completely retained in the water column,[98] that Attleboro discharges experience some dilution before reaching Rhode Island,[99] and that downstream phosphorus levels are lower than the levels in dis-

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(continued)
Qr= Qd + Qs = 5.53 cfs + 13.3 cfs = 18.83 cfs

Qs = 5.53 cfs

Cs = 0.100 mg/l

Qd = 13.3 cfs

Cd = [(0.100 mg/l)(18.83 cfs)-(0.100mg/l)(5.53cfs)]/13.3 cfs

Cd = 0.100 mg/l

RTC at 64 (Response #F.2).

[97] The City does not challenge the equation the Region used to calculate the effluent limit. Rather, it challenges the assumptions that led the Region to conclude that reducing the calculated effluent limit based on dilution and attenuation was not appropriate. Later in its petition, *see* City's Petition at 34, the City claims that the Fact Sheet did not provide the same level of detail the RTC provides with respect to the equation. We will address this argument later in this decision. *See infra* Part IV.B.4.

[98] City's Petition at 25 (citing Revised Fact Sheet at 5).

[99] City's Petition at 25 (citing EPA's Response to North Attleboro Permit Comments at 16).

charges from the Facility during low flow conditions[100]); and (3) the "current attenuation rate is 40%" in the Ten Mile River.[101] *Id*. at 26. With respect to the Region's determination that background concentrations are high, the City argues that discounting attenuation[102] on this basis contradicts statements the Region made elsewhere that background phosphorus levels will "decrease significantly." *Id*. Finally, the City argues that the Region applied an irrational approach by "[p]icking and choosing the most restrictive data from different seasons reflecting different flow conditions." *Id*. According to the City, the Region cannot use low flow conditions to calculate the limit and then decide not to account for attenuation based on high flow data.[103] *Id.*; *see also* City's Reply Brief at 14; Tr. at 43-44.

In sum, the City claims that the record shows that phosphorus discharges from the Facility do experience dilution and attenuation, that the Region had to consider dilution and attenuation in its calculation of the permit limit, and that the Region has provided no sound basis for declining to impose a less stringent limit based on these factors. We analyze each of these arguments in detail below.

As noted above, the City claims that section 122.44(d)(1)(ii) bars the permitting authority from assuming that there is no dilution or attenuation, the implication being that the Region had an obligation to impose a lower effluent limit based on these factors. As explained earlier in this decision,[104] the City's reliance on this provision for the proposition that the permit issuer must adjust effluent limits for dilution and/or attenuation is mistaken.

Not only do we find no legal obligation to reduce effluent limits based on dilution or attenuation, but also we find no abuse of discretion in the Region's determinations regarding the propriety of using these factors in the context of this case. As noted above, the Region decided not to reduce the phosphorus limit based on dilution because it found that the existing background is high and therefore offsets the amount of available dilution under low flow conditions. RTC at 64 (Response #F.2). This determination was based on an analysis of data taken above

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[100] City's Petition at 26 (citing RTC at 67).

[101] The City refers to the average observed phosphorus attenuation during low flow conditions. *See* Attachment 9.

[102] Here as well, the City uses the terms dilution and attenuation interchangeably. *See supra* note 49. The Region took care in its treatment of these concepts to provide specific reasons for not considering dilution and specific reasons for not considering attenuation. *See* RTC at 67 (Response #F.2). Indeed, in the RTC the Region explained that high background concentrations offset the low dilution available during low flows, not attenuation. *See id*. at 64. The Region did, however, consider expected reductions in phosphorus in its analysis of attenuation.

[103] The City refers to what the parties call the "spring sampling event," which consists of data taken during the month of May at a high flow event. *See* RTC Attachment 9.

[104] *See supra* note 43; *see also supra* Part IV.B.1.b.i.(c)(1).

and downstream of the Facility's discharge and the confluence between the Ten Mile River and the Seven Mile River. The Region explained that even though the Seven Mile River, which joins the Ten Mile River downstream of the Attleboro discharge, could theoretically serve to dilute the phosphorus concentrations in the Ten Mile River, the data show otherwise. *Id*. at 66-67. The data showed similar phosphorus concentrations downstream of the confluence of these two rivers and above Attleboro's discharge, which, according to the Region, "indicates an increase in the phosphorus load due to the Attleboro [discharges] that offsets any dilutive effect from the Seven [m]ile River flow." *Id*. The Region further observed that concentrations of total phosphorus downstream of the Seven Mile River, which range from 0.11 mg/l to 0.2 mg/l, exceed the target phosphorus concentration (i.e., 0.1 mg/l). *Id*. In its appeal brief, the City does not challenge these observations or data nor does it address the Region's finding that concentrations downstream of the Seven Mile River exceed 0.1 mg/l. Its argument on appeal is that the record shows that there is some dilution occurring in the receiving waters. This argument, however, does not address the Region's analysis that shows why consideration of dilution in this case is not appropriate.[105]

Similarly, we are not persuaded by the City's argument that the Region's reliance on high background concentrations is contradicted by other statements in the record. We agree with the Region that "[t]here is no logical contradiction in discounting the impact of current dilution" due to observed high background concentrations, and also factoring in the effect of expected background reductions in considering whether to reduce the effluent limitation based on attenuation. This approach is consistent with the overall conservative approach the Region has adopted with respect to nutrient permitting, especially in aquatic systems like the Ten Mile River, where cultural eutrophication is already underway and the cycle must be stopped to allow gradual restoration of the system. In addition, in light of the Region's finding that concentrations downstream of Attleboro exceed the 0.1 mg/l, it is not unreasonable for the Region to consider current background concentrations despite any expected future reductions. In sum, contrary to the City's suggestions, the Region's analysis with respect to dilution seems reasonable and does not strike us as clearly erroneous.

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[105] It is not until the reply brief that the City attempts to articulate a challenge against the Region's analysis. The City argues that the Region should not have looked to the Facility's past discharge, but to the discharge that would be allowed under a permit limit of 0.2 mg/l. City's Reply Brief at 14. This is a new argument not raised in the petition. Ordinarily, the Board does not allow petitioners to raise new arguments in filings subsequent to their petition for review. *See In re Arecibo & Aguadilla Reg'l Wastewater Treatment Plants*, 12 E.A.D. 97, 123 n.52 (EAB 2005) (noting that attempt to use reply brief to substantiate a claim with new arguments was tardy and that petitioners should have raised all their claims and supporting arguments in their petitions); *see also In re Zion Energy, L.L.C.*, 9 E.A.D. 701, 707 (EAB 2001); *In re Rohm & Haas Co.*, 9 E.A.D. 499, 514 n.23 (EAB 2000). Thus, this belated argument is rejected as untimely.

With respect to attenuation, the City has also failed to meet its burden of showing that the Region clearly erred or abused its discretion in deciding not to impose a less stringent limit based on attenuation. In explaining its rationale for declining the City's assertion that a lower limit be imposed based on attenuation, the Region noted that "[i]n general, much of the phosphorus removed by in-stream physical and biological processes is not permanently removed from the environment, but rather settles to the bottom where it is available for further biological growth, or is subsequently transported to downstream impoundments during *high flow events*." RTC at 67 (Response #F.2) (emphasis added). The Region also explained why it believed that it was not appropriate to use the current level of attenuation. The Region noted that reductions in attenuation are expected in the future as the cultural eutrophication process is addressed through the imposition of more stringent phosphorus controls on dischargers to the Ten Mile River. *Id*. ("Because phosphorus loading from the City will not be attenuated by in-stream eutrophic processes under future conditions to the same extent they are today * * * EPA does not believe it is appropriate or reasonable to assume the continuation of existing summer attenuation rates when calculating a permit limit."). While the Region did acknowledge that monitoring data indicate a reduction of phosphorus load downstream of the North Attleborough and Attleboro treatment plants during low flows, it also noted that under high flow events the record showed minimal attenuation. *Id*. ("When the spring sampling event is included, there is only about 10 percent attenuation of the phosphorus load.").[106] It also pointed out that "even if there is a small attenuation of phosphorus downstream of the discharge under future conditions, this will serve to help attain water quality criteria in Turner Reservoir, rather than justify an increased discharge from Attleboro." *Id*. at 67.

The City's argument against the Region's determination regarding attenuation is primarily a challenge to the use of high flow data in its analysis. The City's main claim is that determining the effluent limitation based on low flows and then deciding to discount attenuation based on high flow (i.e., on the "spring sampling event") is an arbitrary approach. We disagree. As the Region points out, to limit consideration of phosphorus attenuation only to low flow conditions would be contrary to the need to control the overall load of phosphorus being transported downstream under all conditions. Indeed, the purpose of imposing effluent limitations that meet water quality criteria during low flow conditions is precisely to make sure that standards are met even during the most adverse conditions. Therefore, it makes sense that if the Region is going to consider the effect of attenuation

[106] In fact, the record is unclear as to what the precise level of attenuation during high flows is. In the RTC, the Region reported a 10% attenuation during high flows (i.e., the spring event). RTC at 67. However, Attachment 9, which tabulates the monitoring data the Region relied upon to make its determination regarding dilution and attenuation, shows no attenuation during high flows. *See id.* Attachment 9.

in deciding whether to reduce an effluent limitation, it consider attenuation under all conditions, not only during low flow conditions. In addition, consideration of the "spring sampling event" does not strike us as arbitrary and capricious, particularly because such an event covers part of the period where the contested permit limit is to be applied.

The City argues for the first time in its reply brief that the Region's observation that phosphorus removed by attenuation is not permanently removed from the environment is erroneous because low flow data already take into account this phenomenon. *See* City's Reply Brief at 13, Tr. at 44. This new argument is untimely and rejected as such. In any event, the City does not elaborate on this point, nor does it provide evidence supporting this assertion. The Region explained that phosphorus removed by attenuation tends to settle at the bottom where it may become available for further biological growth, or is transported downstream during high flow events. Indeed, the data the Region relied upon show higher phosphorus loads during high flows events, *see* RTC Attachment 9, which, the Region explains, indicate "that phosphorus that had attenuated through plant uptake under low flows was eventually being flushed into the downstream impoundment, and added to the already phosphorus rich sediments, fueling future growth." Region's Resp. at 85-86 (citing RTC at 67). As this Board has noted on numerous occasions, mere allegations of error are not sufficient to support review of a permit condition. A petitioner seeking review must support its allegations with evidence demonstrating how the permit issuer clearly erred in its decision making. Absent such evidence, we would decline to second-guess the Region's conclusion even if this argument were timely.[107]

Similarly, it was not until its reply brief that the City addressed the Region's statement in the RTC that even if there is a small attenuation of phosphorus downstream of the discharge under future conditions, this will serve to help attain water quality criteria in Turner Reservoir, rather than justify an increased discharge from Attleboro. The City labels the Region's statement as "tautological," providing no real support for the Region's position. *See* City's Reply Brief at 13 n.6. However, this argument, which the City did not raise in the Petition, is untimely.

In any event, that Attleboro's discharges may experience some dilution or attenuation before reaching Rhode Island waters is not determinative, given that the Region found, on an independent basis, that the effluent limit is necessary to meet Massachusetts water quality standards. *See* RTC at 51-52 (Response #F.1); Revised Fact Sheet at 4.

For all the foregoing reasons, review of the permit limit on this basis is denied.

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[107] *See supra* note 32.

3. *Metal Limits*

Next, the City challenges the metal limits claiming in general that they "lack adequate explanation and are arbitrary and capricious." City's Petition at 28. Of main concern to the City are the limits for aluminum, cadmium, and lead. *Id*. The City makes two general arguments, one applicable to aluminum, the other applicable to cadmium, lead and other metals. With respect to aluminum, the City contends that the limit "is based on an erroneous reading of the applicable standard." *Id*. at 28. With respect to cadmium, lead, and other metals, the City contends that the new limits need not be as stringent. *See id*. at 30-31. We address each of these arguments in detail below.

a. *Aluminum*

The Permit limits aluminum in Attleboro's discharges to a monthly average of 122 g/l. Region's Resp. Ex. 1 at 4. The City challenges this limit and requests that the limit remain at 210 g/l – the limit under the previous permit – and that the frequency of sampling for bioassay testing be reduced from four times per year to twice per year. *See* City's Petition at 28-30.[108] The City also requests that the Permit be remanded for the Region to consider the applicability of footnote L of the Non Priority Pollutants Table of EPA's *National Recommended Water Quality Criteria* document to this case. *See* City's Reply Brief at 15. That footnote allows, under certain circumstances, the use of Water-Effect Ratios ("WER")[109] to determine site-specific water quality criteria to be used in lieu of the national recommended water quality criteria.[110] The City's main argument on appeal is that the Region erred by not considering the applicability of footnote L and by misreading Massachusetts water quality standards. *See* City's Petition at 29.

More specifically, the City argues that the Region's RTC failed to explain why the Region "lacks all authority to act upon the 'concerns' expressed in footnote L of its own guidance," and adds that "Region 1 cannot refuse to apply all

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[108] The City provides no argument for its request to reduce the frequency of testing, which apparently was not preserved for review in any event, and thus review on that issue is denied.

[109] Water-Effect Ratio (WER) is a criteria adjustment factor that accounts for the effect of site-specific water characteristics on pollutant bioavailability and toxicity to aquatic life. This adjustment factor is used to derive or calculate site-specific criteria. *See* EPA's *Streamlined Water-Effect Ratio Procedure for Discharges of Copper* at 1 (Mar. 2001), *available at* http://www.epa.gov/waterscience/criteria/copper/copper.pdf.

[110] *See* EPA's *National Recommended Water Quality Criteria* – Non Priority Pollutants Table, *available at* http://www.epa.gov/waterscience/criteria/wqctable/.

aspects of its own guidance without being arbitrary and capricious." *Id.*[111] The City also argues that the Region erred in deferring to MassDEP when MassDEP defers to EPA's guidance.[112] *See id.* at 28-30.

In essence, the City challenges the adequacy of the Region's RTC, as the Region did not directly address the applicability of footnote L in the context of this case.

Upon consideration of the comments, we decline to remand the permit on this basis because we hold that the City failed to preserve this issue for review. While the City mentioned footnote L in its comments, it is cited as support for the City's more general claim that the aluminum limit was overly restrictive. This is confirmed by the fact that the City did not request a WER-based limit, as would be the case if footnote L were invoked, but instead requested that the limit on aluminum be completely struck from the permit.[113] The City's comments read as follows:

The water quality criteria for aluminum indicates that the chronic criteria for aluminum may be overly restrictive. [The water quality criteria] says:

> There are three major reasons why the use of Water-Effect Ratios might be appropriate. (1) The value of 87 g/l is based on a toxicity test with the striped bass in water with pH = 6.5-6.6 and hardness <10 mg/L. Data in "Aluminum Water-Effect Ratio for the 3M Plant Effluent Discharge, Middleway, West Virginia" (May 1994) indicate that aluminum is substantially less toxic at higher pH and hardness, but the effects of pH and hardness are not

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[111] While in its petition the City seems to imply that the Region had an obligation to apply footnote L to the facts of this case, *see* City's Petition at 29, in its reply brief, the City states that it is not arguing that the Region was mandated to apply footnote L. It argues instead that "the Region had authority to apply that footnote and should have decided whether to do so." City's Reply Brief at 15 n.7. The City explains that "[t]he petition argues that the Region erred in refusing even to consider the totality of its own guidance * * * ." *Id.* at 15. To the extent that the Region restates the City's argument as alleging a failure to *exercise* footnote L, as opposed to *considering* it, *see* Region's Response at 89, that is inaccurate in light of the clarification in the City's reply brief.

[112] The City explains that MassDEP does not have a numerical value for aluminum and that MassDEP water quality standards turn to *EPA's National Recommended Water Quality Criteria* as directive in such situations. City's Petition at 28-29 (quoting MassDEP's water quality standard).

[113] Notably, the request in comments below is different from the City's request on appeal. On appeal, the City does not request that the limit be struck from the permit. Rather, as previously noted, it requests that the limit remain at 210 g/l and that the frequency of sampling for bioassay testing be reduced from four times per year to twice per year. In addition, even on appeal its position appears to have changed somewhat. *See supra* note 111.

> well quantified at this time. (2) In tests with the brook trout at low pH and hardness, effects increased with increasing concentrations of total aluminum even though the concentration of dissolved aluminum was constant, indicating that total recoverable is a more appropriate measurement than dissolved, at least when particulate aluminum is primarily aluminum hydroxide particles. In surface waters, however, the total recoverable procedure might measure aluminum associated with clay particles, which might be less toxic than aluminum associated with aluminum hydroxide. (3) EPA is aware of field data indicating that many high quality waters in the U.S. contain more than 87 g aluminum/L, when either total recoverable or dissolved is measured.
>
> * * *

Recognizing:

> The importance of aluminum in the wastewater industry,
>
> The fact that the toxic effects that drove the development of the chronic criterion were for ambient environmental conditions far different (hardness of 10 versus hardness of 207) from that of Attleboro,
>
> Attleboro's demonstrated ability to consistently meet its chronic WET[114] limit, which shows the nontoxic nature of Attleboro's effluent
>
> *The limit on aluminum should be struck from the permit.*

City's Petition, Appendix to Petition For Review Attachment A (emphasis added); *see also* RTC at 39 (Comment #B.5).

In the RTC, the Region seems similarly to have interpreted the City's comments as raising concerns about the restrictiveness of the aluminum limit, and not as a request that WER-based aluminum limits be considered in lieu of the national

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[114] This acronym stands for "whole effluent toxicity." Whole Effluent Toxicity ("WET") refers to the aggregate toxic effect to aquatic organisms from all pollutants contained in a facility's effluent. *See* http://www.epa.gov/waterscience/methods/wet/; *see also* 40 C.F.R. § 122.2.

recommended criteria.[115] Also in its response to the petition, the Region claims that the City failed to preserve for Board review its argument about the applicability of footnote L. Region's Resp. at 90.

In our view, the Region's RTC adequately addressed the issues that were clearly raised by the City. The Region responded to the City's request to eliminate the aluminum limit by explaining that the limits were needed because it had determined that Attleboro's aluminum discharge had the potential to cause or contribute to exceedances of water quality standards. *See* RTC at 40 (Response #B.5). In response to Attleboro's comment that the chronic criteria the Region used may be "overly restrictive," the Region explained that it was aware of the concerns, but that it was bound by the criteria adopted by MassDEP. *See id*. ("The acute and chronic criteria used to calculate the aluminum limits are those adopted by MassDEP into its water quality standards, and so must be used as the basis for the effluent limitations. * * * If MassDEP were to propose, and EPA approve less stringent criteria, these would be the basis for future limits."). The Region also addressed Attleboro's claim that "its ability to consistently meet its chronic WET limits, * * * shows the nontoxic nature of Attleboro's effluent." *Id*. (Comment #B.5). Disagreeing with Attleboro's statement, the Region explained that WET limits are not substitutes for chemical-specific limits and that they are not designed to assess the toxicity of individual pollutants. *Id*. (Response #B.5) ("Whole effluent toxicity tests are designed to determine if there are any additive or synergistic toxic effects of the various pollutants in the effluent using a specific organism, and WET limits are not substitutes for chemical-specific limits. They are not designed to assess the toxicity of individual pollutants.").

Even if we were to hold that the mere citation of footnote L was sufficient to preserve the issue now raised on appeal, which we do not, we would find no clear error in the Region's conclusion that it had no authority to apply footnote L, thus eliminating any need to "consider it."

In the RTC, the Region explained that the "chronic criteria used to calculate the aluminum limits are those adopted by MassDEP into its water quality standards." RTC at 40 (Response #B.5). Indeed, the applicable state water quality standard provides that "For pollutants not otherwise listed in 314 CMR 4.00 [as is the case for aluminum], the *National Recommended Water Quality Criteria: 2002, EPA 822-R-02-047, November 2002* published by EPA * * * *are the* allowable receiving water concentrations for the affected waters, *unless* the Depart-

[115] Instead of directly addressing the applicability of footnote L to this particular case, as the City now suggests the Region should have done, the Region acknowledged the City's concern about the aluminum criteria. *See* RTC at 40 (Response #B.5) ("We are aware that there are concerns regarding the aluminum criteria, specifically that the chronic criteria may be overly conservative for some waters.").

ment * * * *establishes a site[-]specific criterion* * * * ." 314 Mass. Code. Regs. 4.05(5)(e) (emphases added). Notably, the standard defers to the water concentrations spelled out in EPA's guidance document, "unless" the State "establishes a site-specific criterion." Since Massachusetts has not established a site-specific criterion for the applicable water body, the Region adopted 87 g/l as the limit for aluminum. Reading the state water quality standard as reserving the development of site-specific criteria to the state, and not EPA, the Region explained in the RTC that "if MassDEP were to propose, and EPA approve less stringent criteria, these would be the basis for future limits." RTC at 40. There is no clear error in this response particularly because subsection 4.05(5)(e)(1) confirms the Region's reading of the standard. Subsection 4.05(5)(e)(1) provides that:

> Where EPA recommended criteria for a specific pollutant are not available [which is not the case here] *or* where the Department determines that they are invalid due to site[-]specific physical, chemical or biological considerations, *the Department shall use a site[-]specific criterion as the allowable receiving water concentration for the affected waters*."

314 Mass. Code. Regs. 4.05(5)(e)(1)(emphasis added). That the Massachusetts water quality standards repeatedly refer to the development of site-specific criteria as a task done by the state are, in our view, indications that Massachusetts intended this task to be reserved for the state.

In addition, other than attempting to differentiate between the conditions under which the national recommended criteria was developed, the City did not explain why application of footnote L would be appropriate in the context of this case.[116]

We also reject as basis for review the arguments the City raises on pages 29-30 of its petition where the City claims that the phosphorus limit has major consequences on the aluminum limit and alleges that it was not given the opportunity to explain the trade-offs of the proposed phosphorus limit. *See* City's Petition at 29-30. On appeal, the City explains that the new phosphorus limit will require more use of poly aluminum chloride ("PAC") in its phosphorus removal process, which in turn will increase the amount of aluminum in the City's discharges. *Id*. The City adds that the Region should have hesitated to require "unnecessary phos-

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[116] Notably, while footnote L suggests that aluminum might be less at higher pH and hardness levels, it also explains that the effects of pH and hardness are not well quantified at this time. *See* RTC at 39-40 (Comment #B.3); EPA's *National Recommended Water Quality Criteria* – Non Priority Pollutants Table, *available at* http://www.epa.gov/waterscience/criteria/wqctable/. The Region also notes that footnote L refers to effluents for an industrial discharger, and that the application of these data to POTW discharges is unclear. Region's Resp. at 93.

phorus limits," that the Region should have considered the interaction between aluminum and phosphorus, and that to achieve the new phosphorus levels imposes an unnecessary and unrealistic cost upon the City. *Id*. at 30.

It is a bit unclear whether these are arguments against the aluminum or the phosphorus limitation. To the extent that the City raises these arguments as a challenge to the aluminum limit, the arguments are irrelevant since, as explained above, the Region is bound by state water quality standards that require application of the criteria set forth in the guidance, unless the state develops site-specific criteria, which is not the case here.[117]

b. *Other Metals*

Next, the City questions the need for the new limits for cadmium, lead, and other metals arguing that "the Facility has shown that its final effluent does not have a toxic effect on the receiving waters." *See id*. The City also claims that "[t]o use less reliable tests to impose unnecessary limits comes at a cost to real water quality, because metals are necessary to accommodate plant operations that improve the overall effluent." *Id*. at 31.

The Region requests that the Board dismiss this argument on procedural grounds on the basis that the City's petition essentially reiterates its prior comments without substantively confronting the Region's RTC. Region's Resp. at 94. Indeed, our examination of the record reveals that on appeal the City does nothing but reiterate the comments it raised below without addressing the Region's response. *Compare* City's Petition at 30-31 *with* RTC at 46 (Comment #E.2).[118]

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[117] Likewise, to the extent that the arguments are raised as a challenge to the phosphorus limitation, we find the argument unpersuasive as a basis for review. To begin with, as explained in the preceding section, we have found no clear error in the Region's determination that a 0.1 mg/l effluent limitation will meet both Massachusetts and Rhode Island standards. Second, the City claims that it was not given an opportunity to comment on some "post-July 2007 DMRs [discharge monitoring reports]" the Region allegedly used to support the phosphorus limit. *See* City's Petition at 30. However, the record shows that the Region relied upon the "post-July 2007 DMRs," not to establish the limit as the City propounds, but in its analysis regarding the need for a compliance schedule for phosphorus. *See* RTC at 82 (Comment & Response #F.9); *id*. at 90 (Response to MassDEP Section 401 Certification). Thus, as a challenge to the phosphorus limit these arguments are inadequate.

[118] Comment #E.2 states:

> With regard to metals we feel the Attleboro facility has maximized its ability to remove metals. Any further removal would have to be achieved at the point source industries. *Further, we feel that the stringent limits proposed are not warranted. Positive bioassay testing from 2003 to present have had no toxicity failures, which proves that the impacts of metals discharged from the Attleboro facility are consistently not compromising the integrity of the Ten Mile River.*

Continued

As already explained in this decision, a petitioner may not simply reiterate comments made during the public comment period, but must substantively confront the permit issuer's subsequent explanations. *Peabody*, 12 E.A.D. at 33; *accord*, *Dominion Energy*, 12 E.A.D. at 666.

In the RTC, the Region explained why WET results showing no toxic effects on the receiving waters do not justify elimination of, or imposition of less stringent, limits for individual pollutants. The Region explained:

> [W]hole effluent toxicity tests are designed to determine if there is any additive or synergistic toxicity affects of the various pollutants in the effluent, and are not designed to assess the toxicity of individual pollutants. Individual metals criteria are established at a level that will be protective of a range of the most sensitive aquatic species. Whole effluent toxicity tests for Attleboro are conducted with only one species.

RTC at 47 (Response #E.2). On appeal, the City does not explain why this response is clearly erroneous, and thus fails to meet its burden. In addition, as we have already noted, cost and technological considerations are not factors in setting WQBELs.[119] In light of these flaws, we decline review of the metal limits.

4. *Alleged New Issues and Procedural Irregularities*

The City's final arguments relate to certain documents and data the Region mentions in the RTC, and alleged procedural deficiencies. Specifically, the City argues that the Region "unlawfully raised new issues for the first time in the response to comments," that were not part of the fact sheets and that the City had no opportunity to comment on. According to the City, this "violates Attleboro's rights to meaningful notice of the record and analysis underlying" the permit limitations. City's Petition at 32-35.

The City identifies the following as "new issues" raised in the RTC: (1) RIDEM's use of 7Q10 flows to calculate retention time, *see* City's Petition at 33 (citing RTC at 75); (2) use of DMRs from May to October 2007 to reject a compliance schedule for phosphorus, *id*. (citing RTC at 82, 90, and attachment 13);[120] (3) Region's reliance on a bloom of Microcystis algae that occurred

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(continued)
RTC at 46 (emphasis added); *see also* City's Petition App. B.

[119] *See supra* Part IV.B.1.b.ii.

[120] Since the City withdrew its challenges to the Region's determinations regarding compliance schedules, *see supra* note 3, we need not address this argument.

around September 2007 to allegedly justify the phosphorus limit, *id*. at 34 (citing RTC at 56); (4) discussion of equation used to calculate the phosphorus limit, *id*. (citing RTC at 64); (5) Region's reliance on the Kester Model, *id*. (citing RTC at 29); (6) Region's reliance on a "preliminary report" issued by the Narragansett Bay Commission used to discount any "upstream flow of nutrient bearing waters," *id*. (citing RTC at 36); (7) discussion of an alleged new theory regarding the MERL model and the Providence and Seekonk Rivers system, *id*. (citing RTC at 35); and (8) Region's shifting from "a dissolved-oxygen-driven calculation" to one based upon "prevention of cultural eutrophication," *id*. at 35. The City also claims that "given the reopening of the comment period, there should have been a 60[-]day public comment period, not a 30[-]day one," and suggests that it was prejudiced by the Region's denial of a hearing. *Id*.

We begin our analysis by determining whether the inclusion of the above-mentioned information in the RTC when they had not previously been included in the fact sheets deprived Attleboro of meaningful notice. We conclude that it did not.

The suggestion that the permitting authority must include in the fact sheet of a permit decision all of the information used in informing its final permit determinations is mistaken.[121] While a fact sheet must include certain information, *see* 40 C.F.R. § 124.8,[122] the permitting authority is not required to provide compre-

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[121] The permitting authority is only required to "*briefly* set forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit," and, when applicable, include "*[a] brief summary* of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record." 40 C.F.R. § 124.8(a), (b)(4) (emphases added).

[122] Section 124.8(b) provides, in pertinent part, that the fact sheet is to include, when applicable, the following information:

> (1) A brief description of the type of facility or activity which is the subject of the draft permit;
>
> (2) The type and quantity of wastes, fluids, or pollutants which are proposed to be or are being treated, stored, disposed of, injected, emitted, or discharged[;]
>
> * * *
>
> (4) A brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record required by § 124.9 (for EPA-issued permits)[.]

40 C.F.R. § 124.8(b).

hensive details in a fact sheet.[123] The rules governing permit proceedings specifically allow the permitting authority to add materials to the administrative record during its review of comments on the draft permit to address new points or new material.[124] We have stated that the appeals process affords petitioners the opportunity to question the validity of documents included after the closing of the comment period. *See In re Caribe Gen. Elec. Prod., Inc.*, 8 E.A.D. 696, 705 n.19 (EAB 2000), *appeal dismissed per stip.*, No. 00-1580 (1st Cir. 2001). We have also stated that the response to comments, not the fact sheet, provides the Agency's final rationale for its decision. *See Dominion Energy*, 12 E.A.D. at 533.

On these bases, the Board has rejected claims similar to the ones the City raises. *See, e.g.*, *In re American Soda, LLP*, 9 E.A.D. 280, 299 (EAB 2000) (rejecting challenge to addition of certain report in the administrative record after the close of the public comment period); *Caribe Gen. Elec.*, 8 E.A.D. at 705 n.19 (rejecting claim that the inclusion of information arriving after the close of the public comment period denied the petitioner of its right to comment on the information's validity); *In re Ash Grove Cement Co.*, 7 E.A.D. 387, 431 (EAB 1997) (rejecting request to reopen the public comment period for the purpose of evaluating materials added to the administrative record after the comment period on the draft permit).

Clearly, in this case, the City had the opportunity, after permit issuance and before the deadline for filing the petition, to review and comment on the documents and information mentioned in the RTC, as evidenced by its appeal. In keeping with our prior decisions, we find no clear error in the Region's inclusion of these materials in the RTC rather than the fact sheets.

In addition, our examination of the record shows that the documents and information the City identifies stemmed from comments received during the public comment period, and do not raise substantial new questions concerning the permit.[125] Rather, they served to further support the Region's rationale already set

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[123] With respect to the content of a fact sheet, the preamble to the proposed rules explained that a fact sheet must "explain[] the basis for the draft permit in some detail * * *," but that "[b]ecause there are practical limits to EPA's ability to explain each of the permits it issues in comprehensive detail, *the discussion in the fact sheet * * * should be proportional to the importance of the issues involved* and the degree of controversy surrounding them." Consolidated Permit Regulations, 44 Fed. Reg. 34,244, 34,264 (proposed June 14, 1979) (emphasis added).

[124] *See* 40 C.F.R. § 124.17(b) ("If new points are raised or new material supplied during the public comment period, EPA may document its response to those matters by adding new materials to the administrative record.").

[125] The regulations governing the permitting process do not call for a new comment period simply because the Region adds materials to the administrative record during its review of comments on the draft permit. *See* 40 C.F.R. § 124.17(b). Section 124.17(b) contemplates supplementation of the
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forth in the fact sheets.

For instance, neither the use of 7Q10 flows to calculate retention times nor the September 2007 bloom data determined the effluent limits that the City challenges. As noted earlier in this decision, the fact that Rhode Island used 7Q10 flows to calculate retention time has no bearing on the determination that Rhode Island's criteria for "lakes" apply to the Turner Reservoir. Similarly, the September 2007 bloom data were not used to justify the phosphorus limitation; rather the record shows that the Region used this information as additional support for its assessment of the receiving waters. *See* RTC at 55-57 (Response #F.1).

The record also shows that the Region's reliance on the Kester Model, the elaboration on the calculations used to establish the phosphorus limitation, the use of the "preliminary report" by the Narragansett Bay Commission, and the discussion about the MERL model and the Providence and Seekonk Rivers system, were mentioned in the RTC in response to comments the City made. *See* RTC at 28-29 (Comment & Response #B.2.a); *id*. at 62-64 (Comment & Response #F.2); *id*. at 36-37 (Comment & Response #B.2.e); *id*. at 34-35 (Comment & Response #B.2.d). The regulations contemplate supplementation of the record in response to points raised during the public comment period. *See* 40 C.F.R. § 124.17(b) ("If new points are raised or new material supplied during the public comment period, EPA may document its response to those matters by adding new materials to the administrative record."). Thus, we see no clear error on the Region's part.[126]

Lastly, as noted previously, the appeal process afforded the City the opportunity to comment on new material. For example, on appeal the City raised various arguments regarding the applicability of the Kester Model for the determina-

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(continued)
administrative record during the Region's preparation of the response to comments. *Ash Grove Cement*, 7 E.A.D. at 431. Reopening is generally at the discretion of the Region and is only appropriate where information received during the comment period raises "substantial new questions" regarding the permit. *Id*. (citing 40 C.F.R. § 124.14(b)); *accord NE Hub*, 7 E.A.D. at 584-85; *In re Amoco Oil, Co.*, 4 E.A.D. 954, 980 (EAB 1993).

[126] With respect to the equation used to establish the phosphorus limitation, we note that while the revised fact sheet does not explain how the Region went from the recommended *Gold Book* value to the final effluent limitation, the fact sheet did briefly explain the basis for establishing the phosphorus condition. Specifically, the Region explained that given the lack of effective dilution under the 7Q10 flow conditions a monthly limit of 0.1 mg/l was established to ensure that *Gold Book* values will not be exceeded in Massachusetts and Rhode Island waters. *See* Revised Fact Sheet at 4-5. This in our view is enough to satisfy section 124.8. In addition, on appeal the City does not challenge the use of this particular equation; instead, the City challenges the Region's determinations regarding dilution and attenuation.

tion of the nitrogen limit.[127] We also note that while the City had the opportunity to explain on appeal why the Region's reliance on the preliminary report by the Narragansett Bay Commission, the discussions about the differences between the MERL model and the Providence and Seekonk Rivers system, and the alleged shifting from "a dissolved-oxygen-driven calculation" to one based upon "prevention of cultural eutrophication," raise substantial new questions, constituted clear error, or hampered the City's ability to fairly develop its appeal, the City did not provide any such explanation.

Accordingly, we find no clear error in the Region's inclusion of those materials in the RTC rather than the fact sheets.

We are also unpersuaded by the City's remaining arguments. As noted above, the City claims that the reopened comment period should have been 60 days long, instead of thirty days, and suggests that it was prejudiced by the Region's denial of a hearing.

Once again the City has failed to meet threshold procedural requirements for seeking Board review by not substantively confronting the Region's RTC regarding these two issues. The City raised these same arguments in comments below, to which the Region responded,[128] but the City has failed on appeal to explain why such responses are clearly erroneous or warrant Board review.

In the RTC, the Region explained that it reopened the public comment period pursuant to, and in accordance with, 40 C.F.R. §§ 124.10, .14(b). The Region also explained that a thirty-day comment period was appropriate given the limited scope of the proposed permit revision, and because in its experience a thirty-day public comment period has been adequate even where complex technical matters are at issue. RTC at 84 (Response #F.11).

We find no clear error in these determinations. While the regulations regarding reopening of the public comment period provide, under certain circumstances, for reopening for sixty days, *see* 40 C.F.R. § 124.14(a)(1),[129] and this

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[127] *See* discussion *supra* Part IV.B.1.b.i.(a).

[128] *See* RTC at 83-84 (Comment & Response #F.11).

[129] Section 124.14(a) provides in pertinent part:

> (1) The Regional Administrator may order the public comment period reopened *if the procedures of this paragraph could expedite the decisionmaking process.* When the public comment period is reopened under this paragraph, all persons, including applicants, who believe any condition of a draft permit is inappropriate or that the Regional Administrator's tentative decision to deny an application, terminate a permit, or pre-

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seems to be the provision to which the City alludes, the Region did not avail itself of this particular provision when it decided to reopen the comment period. Instead, the Region followed sections 124.10[130] and .14(b)-(c),[131] which authorize a thirty-day reopened period, when "any data information or arguments submitted during the public comment period * * * appear to raise substantial new questions concerning a permit." Indeed, the record shows that the Region reopened the public comment period not because it believed that reopening would expedite the decision making process, as required for reopening under section 124.14(a)(1), but because new information submitted during the public comment period appeared to raise substantial new questions concerning the permit.[132] *See* RTC at 51-52 (Response #F.1).

(continued)

> pare a draft permit is inappropriate, must submit all reasonably available factual grounds supporting their position, including all supporting material, by a date, *not less than sixty days* after public notice under paragraph (a)(2) of this section, set by the Regional Administrator.

40 C.F.R. § 124.14(a)(1) (emphases added).

[130] Section 124.10(b)(1) provides as follows:

> (1) Public notice of the preparation of a draft permit (including a notice of intent to deny a permit application) required under paragraph (a) of this section shall allow at least 30 days for public comment.

40 C.F.R. § 124.10(b)(1).

[131] Sections 124.14(b) and (c) provide in pertinent part:

> (b) If any data information or arguments submitted during the public comment period, including information or arguments required under § 124.13, appear to raise substantial new questions concerning a permit, the Regional Administrator may take one or more of the following actions:
>
> * * *
>
> (3) Reopen or extend the comment period under § 124.10 to give interested persons an opportunity to comment on the information or arguments submitted.
>
> (c) Comments filed during the reopened comment period shall be limited to the substantial new questions that caused its reopening. The public notice under § 124.10 shall define the scope of the reopening.

40 C.F.R. § 124.14(b)-(c).

[132] Specifically, RIDEM'S comments regarding compliance with Rhode Island standards for lakes appeared to raise new questions. *See* RTC at 51-52 (Response #F.1).

Similarly, we are not persuaded by the City's suggestion that it was prejudiced by the denial of a hearing. The Region denied the request because of the limited comments received and the fact that there were no other hearing requests. RTC at 84 (Response #F.11). We find no clear error in this determination as the rules governing public hearings only require the Agency to hold a public hearing when there is "a significant degree of public interest in a draft permit." 40 C.F.R. § 124.12(a)(1).[133] In addition, we have interpreted this provision as giving the permit issuer broad discretion in deciding whether to hold a hearing. *See In re Weber* # 4-8, 11 E.A.D. 241, 246 (EAB 2003) (stating that the Agency is afforded broad discretion in deciding whether to hold a public hearing); *In re City of Fort Worth*, 6 E.A.D. 392, 407 (EAB 1996) ("The decision to hold a public hearing under 40 C.F.R. § 124.12(a) is 'largely discretionary.'"); *In re Avery Lake Prop. Owners Ass'n*, 4 E.A.D. 251, 252 (EAB 1992) (same).

Notably the City does not explain why the Region's reliance on sections 124.10 and .14(b)-(c), instead of § 124.14(a), and its decision to deny the hearing request are clearly erroneous. Review on these bases is therefore denied.

V. *CONCLUSION*

For the foregoing reasons, we deny the City's petition for review in all respects.

So ordered.

[133] Section 124.12(a)(1) provides: "The Director shall hold a public hearing whenever he or she finds, on the basis of requests, a significant degree of public interest in a draft permit(s)." 40 C.F.R. § 124.12(a)(1).