

United States Court of Appeals For the First Circuit

No. 16-2280

CITY OF TAUNTON, MASSACHUSETTS,

Petitioner,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,

Respondent.

PETITION FOR REVIEW OF AGENCY ACTION OF
THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Before
Torruella, Lipez, and Thompson,
Circuit Judges.

John C. Hall, with whom Philip D. Rosenman and Hall & Associates were on brief, for petitioner.

Sarah A. Buckley, Trial Attorney, United States Department of Justice, Environment and Natural Resources Division, Environmental Defense Section, with whom Jeffrey H. Wood, Acting Assistant Attorney General, Environment and Natural Resources Division, David J. Kaplan, Trial Attorney, and Samir Bukhari, Of Counsel, United States Environmental Protection Agency, Region 1, were on brief, for respondent.

Michael Rubin, Assistant Attorney General, Rhode Island Attorney General's Office, with whom Peter F. Kilmartin, Attorney General, State of Rhode Island, on brief as amicus curiae.

July 9, 2018

TORRUELLA, Circuit Judge. The City of Taunton, Massachusetts (the "City"), objects to the decision of the Environmental Protection Agency (EPA) to impose a limit -- through a National Pollutant Discharge Elimination System (NPDES) permit -- on the amount of nitrogen that the Taunton Wastewater Treatment Plant (the "Facility") may discharge. After considering all of the City's challenges, both procedural and substantive in nature, we uphold the EPA's permitting decision.

I.

A.

It is useful to begin with an overview of the legal landscape that is relevant to this appeal. The Clean Water Act (CWA) prohibits the "discharge of any pollutant" unless that discharge complies with NPDES permit requirements. 33 U.S.C. §§ 1311(a), 1342. The EPA is responsible for issuing NPDES permits unless a state agency is authorized to do so. Id. § 1342(a)-(c). No Massachusetts agency is so authorized. Under the CWA, NPDES permits must include any water-quality-based limitations that are necessary to ensure compliance with the water quality standards of the state where the pollutant discharge in question is to occur, as well as those of any affected downstream states. See Id. §§ 1311(b)(1)(C), 1341(a)(2); 40 C.F.R. §§ 122.4(d), 122.44(d)(4). Giving effect to this requirement, EPA

regulations provide that NPDES permits "must control all pollutants" that the EPA "determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard." 40 C.F.R. § 122.44(d)(1)(i); see also Arkansas v. Oklahoma, 503 U.S. 91, 110 (1992) (explaining how this framework incorporates state water quality standards into "the federal law of water pollution control").

NPDES permits issue for a period of time not to exceed five years. 33 U.S.C. §§ 1342(a)(3), (b)(1)(B); 40 C.F.R. § 122.46(a). Upon receiving a permit renewal application, the permitting authority -- the EPA, in this case -- prepares a draft permit setting out the proposed "effluent limitations, standards, prohibitions . . . and [other] conditions." ¹ 40 C.F.R. § 124.6(d)(1), (d)(4)(v). So too must the EPA issue a "fact sheet" that "briefly set[s] forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit." Id. § 124.8(a). The public comment

¹ The noun "effluent" is defined as "the outflow of a sewer, septic tank, etc." Webster's New World Dictionary & Thesaurus 195 (1996); see also 33 U.S.C. § 1362(11) ("The term 'effluent limitation' means any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean . . .").

period opens when the EPA publishes a public notice of the draft permit. After reviewing the comments submitted during that period, the EPA issues a final permit decision along with a formal "response to comments." Id. §§ 124.15, 124.17(a). "Any person who filed comments on the draft permit or participated in a public hearing on the draft permit may file a petition for review" of the permit with the Environmental Appeals Board (EAB). Id. § 124.19(a)(2).

B.

We also find it useful to provide a brief overview of the facts and procedural events that are central to this appeal, though we will also discuss those in greater detail in assessing the City's various challenges.

This appeal revolves around the NPDES permit that the EPA issued for the Facility in 2015. The City owns the Facility, which also treats wastewater from the towns of Raynham and Dighton. The Facility discharges into the estuarine portion of the Taunton River, which, in turn, flows into Mount Hope Bay. Located partially in Rhode Island and partially in Massachusetts, Mount Hope Bay is part of the larger Narragansett Bay. The Facility is the second-largest point-source contributor of nitrogen to the Taunton River watershed.² Nitrogen pollution stimulates excessive

² "The term 'point source' means any discernible, confined and

plant growth in bodies of water, which can deprive waters of the oxygen necessary to sustain other organisms -- a process called "eutrophication." See Upper Blackstone Water Pollution Abatement Dist. v. EPA, 690 F.3d 9, 11-12 (1st Cir. 2012) (describing eutrophication in greater detail).

In 2005, the City applied to renew its soon-to-expire 2001-issued NPDES permit. The 2001 permit did not limit the Facility's discharge of nitrogen, but it did require nitrogen monitoring. The EPA issued a draft permit in 2007, but its review of the ensuing public comments led it to conclude that it might be necessary for the permit to impose nutrient limits. After further research, the EPA issued a superseding draft permit, along with the mandatory accompanying fact sheet, in 2013.³ That draft permit sought to limit the Facility's nitrogen discharges to an average of 210 lbs. per day. As the fact sheet explained, the EPA found that limitation necessary after determining that the Taunton

discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." 33 U.S.C. § 1362(14). However, "[t]his term does not include agricultural stormwater discharges and return flows from irrigated agriculture." Id.

³ While the 2001-issued NPDES permit for the Facility expired in 2006, it was administratively continued pursuant to 40 C.F.R. § 122.6.

River and Mount Hope Bay "are suffering from the adverse water quality impacts of nutrient overenrichment, including cultural eutrophication," and concluding that the City's nitrogen discharges had the "reasonable potential" to cause or contribute to that overenrichment. See 40 C.F.R. § 122.44(d)(1).

At the City's request, the EPA extended the public comment period to 90 days, during which time the City submitted a substantial volume of comments objecting to the nitrogen limit that the draft permit sought to impose on the Facility. After the extended public comment period closed, the City sought on multiple occasions to submit what it characterized as "supplemental comments." The EPA, however, rejected these as untimely, and therefore declined to address them in its response to comments.

After the final permit issued, the City appealed to the EAB, challenging both the need for any nitrogen limit and the specific limit that the permit imposed. The City also filed two motions before the EAB to supplement the record with, among other things, the documents it had previously attempted to submit with its "supplemental comments." The EAB denied those motions. The EAB also denied the City's administrative appeal on the merits, along with the City's subsequent motion for reconsideration. The final permit went into effect on June 22, 2016.⁴

⁴ The permit did not require the City to give immediate effect to

The City then appealed to us, challenging this final agency action, see 33 U.S.C. § 1369(b)(1)(F), on various procedural and substantive grounds. After the parties filed their appellate briefs, the EPA moved to strike certain portions of the City's reply brief and supplemental appendix because they involved documents from outside of the agency record.⁵ In response, the City moved to supplement the record with the documents at issue. The City also filed a motion "For Leave to Adduce New Material Evidence and Compel Respondent's Review of the New Information." We now resolve these motions and the merits of the City's appeal.

II.

The Administrative Procedure Act (APA) governs our review of the EPA's actions and decisions amid the NDPES permitting process. See City of Pittsfield v. EPA, 614 F.3d 7, 10 (1st Cir. 2010). Accordingly, we may only overturn what the EPA has done if we find that it was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). More concretely, we are to leave agency action undisturbed unless

its nitrogen limit, but rather set out a 10-year staged compliance schedule for the City to follow.

⁵ We denied the State of Rhode Island's motion to intervene on behalf of the EPA, but highlighted that it was free to "present its position in an amicus curiae brief," which it then did.

the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983). "This deference goes to the entire agency action, which here includes both the EPA's permitting decision and the EAB's review and affirmance of that decision." Upper Blackstone, 690 F.3d at 20.

Here, the "scientific and technical nature of the EPA's decisionmaking" increases our level of deference. Id. (citing Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc., 462 U.S. 87, 103 (1983) (explaining that when an agency is acting "within its area of special expertise, at the frontiers of science as opposed to [making] simple findings of fact, a reviewing court must generally be at its most deferential")). We are particularly mindful that "where a complex administrative statute, like those the EPA is charged with administering, requires an agency to set a numerical standard, courts will not overturn the agency's choice of a precise figure where it falls within a 'zone of reasonableness.'" Upper Blackstone, 690 F.3d at 28.

Similarly, because interpreting and implementing the CWA falls squarely within the EPA's bailiwick, see Adams v. EPA, 38

F.3d 43, 49 (1st Cir. 1994), we defer to its "reasonable interpretation" of that statute, Upper Blackstone, 690 F.3d at 21. See also Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837, 843 (1984) ("[I]f the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute."). Finally, the EPA enjoys greater deference still when interpreting its own regulations. Upper Blackstone, 690 F.3d at 21. Its interpretation of those regulations shall be "controlling unless 'plainly erroneous or inconsistent with the regulation.'" Auer v. Robbins, 519 U.S. 452, 461 (1997) (quoting Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 359 (1989)).

A.

1.

After briefing before this court concluded, the EPA moved to strike certain documents in the City's supplemental appendix, in addition to parts of the City's reply brief that cited those documents, as outside of the administrative record. These documents comprised: (1) a 2005 Rhode Island nutrient policy document; (2) slides prepared by the Narragansett Bay Commission; and (3) a draft report from the Narragansett Bay Estuary Program (the "draft NBEP report"). In response, the City cross-moved to

supplement the record. The City argued that it was entitled to refer to the documents at issue in rebutting arguments that the State of Rhode Island had raised in its amicus brief. Specifically, the City pointed to Rhode Island's contentions that: (1) "The fact that [the Rhode Island Department of Environmental Management's] nitrogen limitations for numerous in-state sewage treatment plants are numerically consistent with the nitrogen limitation at issue further corroborates the reasonableness of the EPA's decision"; (2) the nitrogen limit that the EPA imposed in the Permit is necessary to ensure compliance with Rhode Island's water quality standards; and (3) that research by the Narragansett Bay Estuary Program and the University of Rhode Island Coastal Institute bolster the EPA's decision.

At the foreground of our analysis here is the principle that, when reviewing an agency's decision under the arbitrary and capricious standard, "the focal point for judicial review should be the administrative record already in existence, not some new record made initially in the reviewing court." Camp v. Pitts, 411 U.S. 138, 142 (1973); see also Fla. Power & Light Co. v. Lorion, 470 U.S. 729, 744 (1985) ("[I]f the reviewing court simply cannot evaluate the challenged agency action on the basis of the record before it, the proper course, except in rare circumstances, is to remand to the agency for additional investigation or

explanation."); Walter O. Boswell Mem'l Hosp. v. Heckler, 749 F.2d 788, 792 (D.C. Cir. 1984) ("To review more than the information before the Secretary at the time she made her decision risks our requiring administrators to be prescient or allowing them to take advantage of post hoc rationalizations." (citing Am. Petrol. Inst. v. Costle, 609 F.2d 20, 23 (D.C. Cir. 1979))).

Yet, exceptions do exist. We have recognized a pair of situations in which we have the discretion to supplement the agency record. Town of Winthrop v. FAA, 535 F.3d 1, 14 (1st Cir. 2008). First, we may consider supplemental evidence to facilitate our comprehension of the record or the agency's decision. Id. Examples of this include agency decisions involving "highly technical, environmental matters," Valley Citizens for a Safe Env't v. Aldridge, 886 F.2d 458, 460 (1st Cir. 1989) (Breyer, J.), or when we are faced with a "failure to explain administrative action as to frustrate effective judicial review," Olsen v. United States, 414 F.3d 144, 155-56 (1st Cir. 2005) (quoting Camp, 411 U.S. at 142-43). Second, a "strong showing of bad faith or improper behavior" may also provide occasion to "order[] the supplementation of the administrative record." Town of Norfolk v. U.S. Army Corps of Eng'rs, 968 F.2d 1438, 1458-59 (1st Cir. 1992) (citing Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402 (1971)).

We note that the City's proffered justification for supplementing the record -- to allow it to respond to arguments raised in an amicus brief -- does not fit neatly within either of these exceptions.⁶ Without passing judgment on whether that is a categorically inadequate reason to supplement the agency record, we find that the City has failed to convince us here that we should exercise our discretion in this manner.

Keeping in mind that our broader adjudicatory task here is to determine whether, on the basis of the record before it, the EPA acted arbitrarily or capriciously, we take note of the City's position that Rhode Island's "assertions were not the basis of [the] EPA's permit limit calculations," and that Rhode Island's scientific and factual averments "were not part of the underlying agency[] decision." It would follow, then, that Rhode Island's assertions also cannot provide a basis for our affirmance of the

⁶ The City also insists that this is a situation when supplementing the record is appropriate because "the good faith of the agency is at issue." The City appears to argue that the EPA shirked its "duty" to "bring forth" the information contained in the draft NBEP report -- which the City says undercuts the EPA's conclusions regarding the permit -- and that we can infer bad faith from this. But, the draft NBEP report is dated April 2017, which is ten months after the final permit went into effect, following the City's unsuccessful administrative appeal. Setting aside the question of whether the draft NBEP report (or its subsequently published final iteration) actually supports the City's position -- which the EPA sharply contests -- we fail to see how the EPA's failure to engage with a document that didn't exist at the time of its permit decision can amount to indicia of bad faith.

EPA's permit decision. So, we do not find it appropriate or necessary to allow the City to go beyond the agency record to rebut those assertions.⁷

Because the City has not convinced us that the record should include the documents at issue in the EPA's motion to strike and the City's cross-motion to supplement the record, we grant the former and deny the latter.

2.

Before oral argument, the City also brought a motion "For Leave to Adduce New Material Evidence and Compel Respondent's Review of the New Information." The City anchored that motion in

⁷ To the extent that the City seeks to cite these documents not to rebut Rhode Island's arguments but rather to attack the merits of the EPA's permit decision (a motive at which its reply brief hints), we emphasize that the proper moment for the City to adduce evidence to that effect was the public comment period. See Cousins v. Sec'y of U.S. Dep't of Transp., 880 F.2d 603, 610 (1st Cir. 1989) (reasoning that parties are not prejudiced by the principle that our review is limited to the agency record because they are free to contribute to that record amid proceedings before the agency). Further, to the extent that the City argues that the draft NBEP report -- which, again, post-dates the permit decision -- should come into the record as evidence that the EPA's permit decision was arbitrary and capricious, we also disagree. We repeat that our review is of the agency's decision based on the record before it. Setting aside whatever merit the City's arguments concerning the substance of that report may have, we recall one of the reasons motivating our limited scope of review: "[T]he hope or anticipation that better science will materialize is always present, to some degree, in the context of science-based agency decisionmaking. Congress was aware of this when it nonetheless set a firm deadline for issuing new permits." Upper Blackstone, 690 F.3d at 23.

section 509(c) of the CWA, see 33 U.S.C. § 1369(c), which, the City claims, gives us the authority to compel the EPA "to review material evidence that arises after the challenged EPA action."

But we do not agree. Section 509(c)'s own terms limit its application to agency "determination[s] . . . required to be made on the record after notice and opportunity for hearing." Id. (emphasis added). That is crucial because the phrase "on the record" serves to invoke formal agency adjudication under the APA. See 5 U.S.C. § 554(a); United States v. Allegheny-Ludlum Steel Corp., 406 U.S. 742, 757 (1972) (explaining, in the context of agency rulemaking, that the APA's provisions governing formal agency proceedings, see 5 U.S.C. §§ 556-57, apply when "the agency statute, in addition to providing a hearing, prescribes explicitly that it be 'on the record'" (quotation omitted)). Thus, section 509(c) applies only to formal agency adjudications. Congress has specified only that the EPA is to issue NDPES permits "after opportunity for public hearing," without specifying whether that hearing must be "on the record." 33 U.S.C. §§ 1326(a), 1342(a). But, we have afforded Chevron deference to EPA regulations setting forth -- in light of Congress's silence on this issue -- that these public hearings need not be "on the record," and that the NDPES permit process is therefore an informal agency adjudication under

the APA. Dominion Energy Brayton Point, LLC v. Johnson, 443 F.3d 12, 14-15, 18-19 (1st Cir. 2006).

This forecloses the City's argument. Because the agency record at issue here pertains to an informal adjudication, section 509(c) of the CWA is inapposite, and does not provide a basis for us to order the EPA to reopen the administrative record to consider the City's purportedly new material evidence. As a result, we deny the City's motion for us do to so.

B.

We turn now to the various procedural challenges that the City brings.

1.

The City first tells us that the EPA "failed to provide public access to fundamental evaluations, analyses, and data used to derive the permit." While the City's precise objections are perhaps not the easiest to discern, we read its brief as essentially asserting two things: (1) that the factsheet, containing only "generalized supporting information for the stringent nutrient limitations," failed to provide adequate support for the draft permit's nitrogen limitation, and (2) that "when challenged regarding the adequacy of that documentation, [the EPA improperly] add[ed] thousands of pages of site-specific studies, data analyses and specific regulatory findings [to the

final administrative record], after the comment period closed." The appropriate remedy, according to the City, is for us to order the EPA to reopen the public comment period so that the City may weigh in on the "new justifications and analyses supporting [the] permit" for which the EPA allegedly deprived the City of a "rebuttal opportunity."⁸

We start with the City's claim that the fact sheet was facially deficient. Under 40 C.F.R. § 124.8(a), the fact sheet that accompanies a draft NPDES permit need only "briefly set forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit." We find that, here, the fact sheet satisfied that requirement.

First, the fact sheet explained how the EPA had arrived at its conclusion that the "Taunton River Estuary and Mount Hope Bay have reached their assimilative capacity for nitrogen," and as

⁸ The City's briefing broadly describes its various procedural challenges in terms of due process violations or violations of its procedural rights. However, we do not understand the City to be raising a Fifth Amendment Due Process Clause claim. Rather, the City's contentions fall under the ambit of the APA. We thus apply arbitrary and capricious review to the City's procedural claims. See United States v. Estate of Boothby, 16 F.3d 19, 21 (1st Cir. 1994) ("In scrutinizing administrative action, a reviewing court is free to correct errors of law, but, otherwise, the court is limited to a search for arbitrary or capricious behavior.") (citing 5 U.S.C. § 706(2)(A)).

a result, were already "failing to attain the water quality standards" that Massachusetts and Rhode Island law impose. The fact sheet then explained the EPA's conclusion that, because the Facility's nitrogen discharges had the "reasonable potential" to cause violations of the applicable water-quality standards, it was necessary to include an effluent limit in the draft permit. Next, the fact sheet detailed how the EPA first calculated the threshold nitrogen concentration for the Taunton River Estuary -- that is, the maximum amount of nitrogen that the Estuary may contain before any water-quality violations result -- and then calculated an "allowable total nitrogen load from the watershed" that would keep the Estuary's nitrogen concentration at or below that threshold. Finally, the fact sheet laid out how the EPA allocated that total allowable nitrogen load among the Estuary's various point-sources of nitrogen -- including the Facility -- to derive limits for each of those nitrogen dischargers. At each step, the EPA identified the datasets and studies it relied upon in making these calculations, and provided a clear account of its reasoning and underlying assumptions.

In light of all of this, we do not agree with the City that the fact sheet provided only "generalized supporting information for the stringent nutrient limitations." Quite the opposite, the fact sheet described in substantial detail the

methodology that the EPA employed in deriving the nitrogen limitation that it ultimately imposed in the draft permit. The City therefore fails to convince us that the fact sheet ran afoul of the regulations governing it.⁹ Having resolved that, we now turn to the City's claim that the EPA improperly added documents to the final administrative record.

According to the City, a "quick comparison of the original 20-page generalized fact sheet discussion versus the 80 pages of site-specific analysis contained in the [response to comments] and final administrative record confirms extensive revisions occurred."¹⁰ The City also protests that the fact sheet

⁹ In its reply brief, the City contends that the fact sheet was inadequate for many of the same reasons for which it claims that the final permit's nitrogen limit was arbitrary and capricious (e.g., it failed to consider "the post-2006 system wide pollutant reductions affecting algal growth and [dissolved oxygen]"). In addition to having been waived, see Waste Mgmt. Holdings, Inc. v. Mowbray, 208 F.3d 288, 299 (1st Cir. 2000) ("We have held, with a regularity bordering on the monotonous, that issues advanced for the first time in an appellant's reply brief are deemed waived."), these arguments, as we explain in addressing the City's substantive challenges, also lack merit.

¹⁰ To the extent that the City argues that the final permit departed impermissibly in substance from the draft permit, we recall that an agency "can make even substantial changes from the proposed version [of a rule], as long as the final changes are 'in character with the original scheme' and 'a logical outgrowth' of the notice and comment." Nat. Res. Def. Council, Inc. v. EPA, 824 F.2d 1258, 1283 (1st Cir. 1987) (quoting S. Terminal Corp. v. EPA, 504 F.2d 646, 658 (1st Cir. 1974)); see also In Re Town of Concord Dep't of Pub. Works, 16 E.A.D. 514, 532-33 (EAB 2014) (upholding the decision not to reopen public comment after rejecting the Town of Concord's argument that the pH limit imposed in a final NPDES

and its supporting documentation suffered from "glaring record omissions," and that it was only at the Final Permit stage that the EPA "disclosed the new information, evaluations, data, and conclusions that purportedly justified its action."

The EPA's rejoinder is that, as the EAB explained, "it is both permissible and expected for [the EPA] to place new material in the Administrative Record when responding to significant comments." The EPA also correctly points out that its regulations provide that 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." 40 C.F.R. § 124.17(b); see also id. § 124.18(b)(4) (the administrative record for a final permit must include "the response to comments required by § 124.17 and any new material placed in the record under that section"). And it does not follow that, because the EPA added new materials to the administrative record in response to comments it received, it also needed to reopen the comment period. The relevant regulations provide that "[i]f any data[,] information[,] or arguments submitted during the public comment period . . . appear to raise

permit was not a "logical outgrowth" of the draft permit). And the City offers nothing in support of any contention that the final permit was not a "logical outgrowth" of the draft permit.

substantial new questions concerning a permit, the [EPA] may . . . [r]eopen or extend the comment period." 40 C.F.R. § 124.14(b) (emphasis added). In the end, the City fails to convince us that the EPA wrongly declined to exercise its discretion to reopen the comment period after adding new documents to the administrative record.

Contrary to what the City asserts, the 60-page difference between the fact sheet and the response to comments does little to suggest that the EPA acted arbitrarily or capriciously. Because it needed only to "briefly set forth" the draft permit's factual and theoretical underpinnings, see 40 C.F.R. § 124.8(a), the fact sheet's comparative brevity cannot alone be indicative of any illegitimate additions to the response to comments. We, therefore, do not agree with the City that the EPA acted arbitrarily or capriciously in adding documents to the record after the public comment period. Nor does the City give us any reason to conclude that the EPA needed to reopen the public comment period after adding those documents.

2.

The City next challenges the EPA's decision not to address the City's untimely "supplemental comments" in the response to comments. 40 C.F.R. § 124.17(a)(2) requires only that the EPA "[b]riefly describe and respond to all significant comments

on the draft permit . . . raised during the public comment period, or during any hearing." (emphases added); see also id. § 124.13 ("All persons . . . who believe any condition of a draft permit is inappropriate . . . must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period."). As we have explained previously, we apply "strict rules of procedural default in the administrative context" for a number of reasons:

First, when the administrative agency is given an opportunity to address a party's objections, it can apply its expertise, exercise its informed discretion, and create a more finely tuned record for judicial review A second reason for applying strict rules of procedural default in the administrative context is to promote judicial economy Finally, enforcing procedural default solidifies the agency's autonomy by allowing it the opportunity to monitor its own mistakes and by ensuring that regulated parties do not simply turn to the courts as a tribunal of first resort.

Adams, 38 F.3d at 50 (quoting Mass. Dep't Pub. Welfare v. Sec'y of Agric., 984 F.2d 514, 523 (1st Cir. 1993)). The City does not proffer any good reason for us to deviate from these principles here. And while the EPA was free to reject the City's untimely comments out of hand, it nonetheless undertook to review them. Thus, the EPA concluded in the response to comments that those untimely comments pertained in large part "to the subject matter of the City's timely submitted comments, which have been duly considered." The EPA then added that "[g]iven the foregoing, and

the fact that the existing permit is long expired, the evidence of ongoing water quality impairments, and the need . . . for timely imposition of more stringent nutrient controls, EPA rejects the 'supplemental comments' as untimely." It therefore declined to respond to those comments. We do not find this to have been arbitrary or capricious.

We similarly uphold the EAB's decision to strike documents that the City attempted to submit for the first time at the administrative appeal stage. The City protests that the EAB's decision "effectively created a double-standard whereby [the EPA] may include extensive new post-comment period analyses and data to justify its action, yet the City is precluded from commenting on any of this new information." But this assertion alone -- especially given our rejection of the notion that the EPA illicitly added information to the final record or that the final permit departed impermissibly from the fact sheet and draft permit -- fails to convince us that the EAB acted arbitrarily or capriciously in policing its waiver rule. See 40 C.F.R. §§ 124.13, 124.19 (requiring that permit appellants raising new arguments "explain why such issues were not required to be raised during the public comment period"). We therefore conclude that the EAB properly refused to consider these new documents.

3.

Finally, the City tells us that "following the issuance of its deficient fact sheet, EPA repeatedly stymied Taunton's access to the Agency's back-up documentation allegedly supporting the contested [total nitrogen] limitation." In brief, the City makes much ado over the EPA's purported unwillingness to allow the City to see documents supporting the draft permit's nitrogen limit. The City's briefing does not make entirely clear what exactly it wanted the EPA to do. But in any event, we note that the City does not argue that the EPA ran afoul of any applicable legal requirement. And as the EPA points out, it needed only to provide physical access to the record during the public comment period, see 40 C.F.R. § 124.10(d)(1)(vi), which it did. As it turns out, the EPA invited representatives of the City to visit its Region One office in Boston to review the administrative record on multiple occasions. The City, meanwhile, expressly rejected that invitation. In sum, because the City fails to show that it was procedurally entitled to anything more than what the EPA afforded it, we do not find the EPA's actions in this respect to have been arbitrary or capricious. See Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc., 435 U.S. 519, 524 (1978) ("Agencies are free to grant additional procedural rights in the exercise of

their discretion, but reviewing courts are generally not free to impose them if the agencies have not chosen to grant them.").¹¹

C.

We now take up the City's substantive challenges to the Permit and its nitrogen limit.

1.

The first arrow that the City pulls from its quiver is that the EPA erred in determining that the Taunton Estuary was nutrient impaired.

As we explained above, NPDES permits "must control all pollutants or pollutant parameters" that the EPA "determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." 40 C.F.R. § 122.44(d)(1)(i). The EPA has interpreted "reasonable potential" to mean "some degree of certainty greater than a mere possibility." In re Upper Blackstone Water Pollution Abatement Dist., 14 E.A.D. 577, 599 n.29 (EAB 2010). "Narrative" water quality criteria are

¹¹ The City also submits that the "EPA's recalcitrance was so pronounced that it prompted a federal court to award attorneys' fees against EPA under FOIA." This is irrelevant, though. Whatever obligations the EPA may have had in connection with any particular FOIA request have no bearing on the EPA's compliance with the framework governing the NPDES permit process.

qualitative, rather than numerical, in nature. See 40 C.F.R. §§ 131.3(b), 131.11 (b).

Massachusetts classifies the Taunton Estuary and the eastern portion of Mount Hope Bay as "Class SB" waters. Per state regulations, Class SB waters "are designated as a habitat for fish, other aquatic life and wildlife . . . and for primary and secondary contact recreation." 314 Mass. Code Regs. § 4.05(4)(b). They "shall have consistently good aesthetic value." Id. Class SB waters must also meet the numeric water quality criterion of a minimum of 5.0 mg/l of dissolved oxygen. Id. § 4.05(4)(b)(1). So too must they satisfy the following narrative water quality criterion:

Unless naturally occurring, all surface waters shall be free from nutrients in concentrations that would cause or contribute to impairment of existing or designated uses Any existing point source discharge containing nutrients in concentrations that would cause or contribute to cultural eutrophication . . . shall be provided with the most appropriate treatment . . . to remove such nutrients to ensure protection of existing and designated uses.

Id. § 4.05(5)(c).

When issuing NDPES permits for states that employ narrative criteria, the EPA must translate those criteria into a "calculated numeric water quality criterion" that the EPA "demonstrates will attain and maintain applicable narrative water quality criteria and will fully protect the designated use." 40

C.F.R. § 122.44(d)(1)(vi)(A). The EPA may arrive at that numerical criterion by using "a proposed State criterion, or an explicit State policy or regulation interpreting [the State's] narrative water quality criterion, supplemented with other relevant information" Id. Massachusetts has not prescribed specific methodologies for deriving numeric nitrogen limitations that correspond to its narrative criteria. It therefore fell to the EPA to do so here.

The EPA looked to an interim report prepared for the Massachusetts Department of Environmental Protection (MassDEP) known as the "Critical Indicators Report." See Massachusetts Estuaries Project, Site-Specific Nitrogen Thresholds for Southeastern Massachusetts Embayments: Critical Indicators, July 21, 2003, <https://www.mass.gov/files/documents/2016/08/mp/nitroest.pdf> (last visited June 14, 2018). As the EPA explained in the response to comments, "[w]hile MassDEP has not adopted the Critical Indicators Report as a specific policy, it has afforded the document technical and scientific weight, [and] has explicitly relied on the report" in other regulatory contexts.

The purpose of that report is to provide a "translator" between Massachusetts's narrative water quality standard and corresponding numeric nitrogen thresholds that would ensure compliance with those standards. Id. at 2. To that end, the

report listed various criteria, or "indicators," to guide assessments of the present health of a given body of water, including the amount of oxygen, nitrogen, and chlorophyll present in that body.¹² Id. at 11. In this sense, those "indicators" serve as factors to consider when assessing how healthy a body of water is. The interim report also provided what it describes as "straw man" threshold levels -- to be "further refined with the collection of additional data and modeling." Id. at 3. For example, per those thresholds, Class SB waters are not impaired when, among other things, "oxygen levels are generally not less than 5.0 mg/l," chlorophyll-a levels are between 3-5 µg/l, and nitrogen levels are between 0.39-0.50 mg/l. Id. at 22. "Moderately impaired" SB waters have oxygen levels that "generally do not fall below" 4.0 mg/l, chlorophyll levels that may reach 10 µg/l, and nitrogen concentrations above roughly 0.5 mg/l.¹³ Id.

¹² As the Critical Indicators Report explains, the amount of chlorophyll in a given body of water provides a measure of the concentration of aquatic plant life in that water, and therefore indicates the extent to which eutrophication has occurred. Id. at 14.

¹³ The case studies giving rise to these figures indicated, according to the report, that regions with nitrogen concentrations above 0.5 mg/l were "clearly impaired," while certain locations began showing signs of impairment once nitrogen exceeded 0.4 mg/l. Id. at 23.

at 23. Class SB waters are "significantly impaired," according to the report, at around 0.6-0.7 mg/l of nitrogen. Id.

The EPA then looked to data from a three-year water quality monitoring study that the School for Marine Sciences and Technology at University of Massachusetts Dartmouth (SMAST) had carried out. The study involved taking monthly water samples from 22 sites across the Taunton Estuary and Mount Hope Bay from 2004 to 2006. The study revealed that all of these sites were suffering from excessive algae growth; each site had an average chlorophyll-a concentration of over 10 µg/l during the study's three-year period. All 22 monitoring stations also had an average dissolved oxygen concentration below 5.0 mg/l during that period. And in the case of 16 monitoring stations, the average nitrogen concentration exceeded .5 mg/l -- where the Critical Indicators Report drew the line for "clearly impaired" waters. Those monitoring stations located in the Taunton River tended to have the highest nitrogen concentrations. The monitoring station closest to the Facility's discharge point showed a particularly high nitrogen concentration -- ranging from 0.66 to 0.99 mg/l during the course of the study.

The EPA also considered data from another monitoring station in Mount Hope Bay, operated by the Narragansett Bay Water Quality Network. That data showed that the dissolved oxygen

concentration at that site fell below 4.8 mg/l on multiple occasions in 2005 and 2006. On two such occasions, the dissolved oxygen concentration remained below 2.9 mg/l for two days, resulting in "hypoxic conditions," or "levels of dissolved oxygen below what is needed by aquatic organisms to breathe," Upper Blackstone, 690 F.3d at 12. The data also showed "multiple events" of chlorophyll-a concentrations exceeding 20 µg/l. Moreover, the data from the monitoring station indicated that the site continued to suffer from elevated chlorophyll-a concentrations and persistent dissolved oxygen concentrations below 5 mg/l in 2010.

The EPA then applied the SMAST and Mount Hope Bay data to the Critical Indicators Report. This led it to conclude that "cultural eutrophication due to nitrogen overenrichment in the Taunton River Estuary and Mount Hope Bay has reached the level of a violation of both Massachusetts and Rhode Island water quality standards for nutrients and aesthetics, and has also resulted in violations of the numeric [dissolved oxygen] standards." According to the City, this conclusion was the product of various errors.

The City first assails the EPA's use of the Critical Indicators Report, stressing that the EPA treated the report's "straw man" threshold levels as final and authoritative when the report treated them as preliminary and requiring further analysis.

The EPA responds that, while the report may hold those threshold levels out as preliminary and subject to future fine-tuning, the report's "indicators" of watershed health are not. Indeed, as the report explains, those indicators "form the basis of an assessment of a system's present health." Massachusetts Estuaries Project, supra at 22. Thus, the EPA explains that it was entitled to use those indicators and apply them "to site-specific data and the extensive scientific literature on cultural eutrophication, to determine that the Taunton Estuary was suffering from nutrient overenrichment."

The EAB, for its part, upheld the EPA's use of the report on this basis, explaining that "the use of criteria from the . . . Critical Indicators Report to evaluate water quality is fully consistent with the NPDES permitting regulations." It added that the EPA's ultimate determination, after considering those indicators, that the Taunton Estuary was nutrient impaired found further support in "the SMAST report itself, which concluded that the Taunton Estuary experienced very high levels of nitrogen and poor water quality due to high algal levels and oxygen depletion."

We agree that the EPA did not use the Critical Indicators Report improperly. The City's objections to the EPA's reliance on the "straw man" thresholds in the Critical Indicators Report are ultimately inapposite, as the EPA relied not on those

thresholds, but rather on the Report's indicators in reaching its conclusion about nutrient impairment. Of course, had the EPA been able to rely on threshold levels not subject to future refinement, then its analysis may have benefitted from greater scientific certainty. But, it was not required to delay its decision until such information became available, and its conclusions are not invalid because they are the product of employing the indicators set out in the Critical Indicators Report to analyze the SMAST data. "As in many science-based policymaking contexts, under the CWA the EPA is required to exercise its judgment even in the face of some scientific uncertainty." Upper Blackstone, 690 F.3d at 23. Using those indicators to determine that the Taunton Estuary was nutrient impaired for purposes of Massachusetts's narrative criteria, see 314 Mass. Code Regs. § 4.05(4)(b), comported with the regulations that govern translating narrative criteria in the absence of an official state-sanctioned methodology, see 40 C.F.R. § 122.44(d)(1)(vi)(A), and was not arbitrary or capricious.¹⁴

¹⁴ We encounter further evidence that the EPA did more than simply uncritically apply those thresholds to the SMAST data in the EPA's calculation of an acceptable total nitrogen threshold for the Taunton River Estuary. Though the Critical Indicators Report provides the "straw man" nitrogen concentration threshold of 0.39-0.50 mg/l for unimpaired waters, the EPA -- finding dissolved oxygen violations and elevated chlorophyll-a concentrations taking place at nitrogen concentrations above 0.45 mg/l -- found that threshold insufficiently protective and therefore, as we explain in greater detail ahead, ultimately determined that a nitrogen threshold of 0.45 mg/l was necessary to prevent water quality

Next, the City protests that, in applying the SMAST data to the Critical Indicators Report, the EPA "did not undertake any analysis to demonstrate the relationship between nitrogen and dissolved oxygen or plant growth" in the Taunton Estuary. As a result, the City says, the EPA failed to rule out a number of other explanations for the Taunton Estuary's low concentration of dissolved oxygen and high concentration of chlorophyll. The City then points to a number of charts drawing from the SMAST data that it submitted during the public comment period, which, it explains, show that no relationship exists between the concentrations of nitrogen and oxygen or between the concentrations of nitrogen and chlorophyll. The absence of any causal relationship, the City presses, renders the EPA's determination that the Taunton Estuary was nutrient impaired arbitrary and capricious.

But, as the EAB correctly determined, the EPA did not need to show causation -- for example, through a statistical regression analysis -- to support its conclusion that the Taunton Estuary was nutrient impaired. Rather, the EPA needed only to conclude that the further discharge of nitrogen had the "reasonable potential to cause, or contribute to an excursion above any State water standard." 40 C.F.R. § 122.44(d)(1)(i) (emphasis added);

standard violations.

see also 314 Mass. Code Regs. § 4.05(4)(b)(1) (establishing the numeric criterion that Class SB waters have a minimum of 5.0 mg/l of dissolved oxygen), (5)(c) (establishing the narrative criterion for Class SB waters that "[u]nless naturally occurring, all surface waters shall be free from nutrients in concentrations that would cause or contribute to impairment of existing or designated uses"). We further note that the words "contribute to" also indicate that nitrogen need not be the sole cause of any potential violation of a state standard, further undercutting the suggestion that the EPA needed to prove causation. Moreover, in upholding the "reasonable potential" determination here, the EAB observed that under the NPDES regulations, the permitting authority has a "significant amount of flexibility in determining whether a particular discharge has a reasonable potential to cause an excursion above a water quality criterion." See also National Pollutant Discharge Elimination System, 54 Fed. Reg. 23,868, 23,873 (June 2, 1989).

The City's arguments thus miss their mark; it is incorrect that the EPA needed to show a causal relationship between high concentrations of nitrogen and low concentrations of dissolved oxygen. The absence of an analysis of this sort from the EPA's "reasonable potential" determination, therefore, cannot have made that determination arbitrary or capricious.

And we also reject, as did the EAB, the City's related contention that this "reasonable potential" determination was erroneous because the SMAST data does not show any relationship between nitrogen, chlorophyll, and dissolved oxygen. In discussing the charts that the City continues to rely on in arguing that no such relationship exists, the EAB first highlighted the explanation in the response to comments that "the SMAST data were not appropriate for the type of analysis (a stressor-response analysis) performed by the [C]ity, and that the SMAST data were generally insufficient to produce any statistically significant correlations." The EAB also credited the EPA's additional observation in the response to comments that the City's selection of certain data to include in these charts "would be expected to produce the results the City sought." And finally, while reemphasizing that the EPA's "reasonable potential" determination did not rely on a stressor-response analysis of the SMAST data, the EAB underscored that the EPA's own analysis of that data "supported the conclusion that higher algal levels result in lower levels of dissolved oxygen."

Having considered, and found unpersuasive, the City's various challenges, we hold that the EPA did not act arbitrarily or capriciously in determining that the Taunton Estuary and Mount Hope Bay were already nutrient impaired, such that further nitrogen

discharges would have at least a "reasonable potential" to give rise to violations of state water quality standards.

2.

The City's next objection concerns the EPA's methodology for determining a target nitrogen concentration that would ensure unimpaired conditions.

The EPA, we recall, needed to include in the permit whatever water-quality-based limitations it found necessary to prevent violations of state water quality standards. See 33 U.S.C. §§ 1311(b)(1)(C), 1341(a)(2); 40 C.F.R. §§ 122.4(d), 122.44(d)(4). Thus, having determined that "cultural eutrophication due to nitrogen overenrichment in the Taunton River Estuary and Mount Hope Bay" was already resulting in violations of the relevant Massachusetts and Rhode Island standards, the EPA then needed to determine the amount of nitrogen that those waters could permissibly contain without giving rise to any violations.

To calculate that total nitrogen threshold, the EPA -- employing what is known as a "reference-based" approach -- looked to one of the monitoring stations in the SMAST study, MHB16, that "consistently met dissolved oxygen standards." As the EPA detailed in the response to comments, MHB16 was, among all of the unimpaired sites in the SMAST study, the site with the highest nitrogen concentration. The nitrogen concentration at MHB16, 0.45

mg/l, also fell within the range that the Critical Indicators Report held out as consistent with unimpaired conditions (0.35-0.5 mg/l). The EPA further explained in the fact sheet that this nitrogen threshold was consistent with "total nitrogen concentrations previously found to be protective of [acceptable dissolved oxygen levels] in other southeastern Massachusetts estuaries [which] have ranged between 0.35 and 0.55 mg/l." Mindful that all of the sites in the SMAST study with a nitrogen concentration above 0.45 mg/l suffered from nutrient impairment, the EPA explained in the response to comments that "there is simply no evidence that a higher target [total nitrogen] concentration would be sufficiently protective in the Taunton River Estuary." The EPA therefore selected 0.45 mg/l as the target nitrogen concentration that would serve as the basis for the effluent limitations the permit would impose on the Facility.

The City protests that the EPA's reliance on MHB16 was "flawed," because MHB16 "could not be more dissimilar" from the Taunton Estuary. In support of this, the City points to comments it submitted in response to the draft permit and fact sheet averring that, among other things, MHB16 is "located in a bay not a tidal river, 23 feet deeper than [the Taunton Estuary], subject to dramatically different hydrodynamics because it is located in a high velocity tidal strait, and subject to different organic

loadings and sediment oxygen demands." According to the City, the "irrationality of using MHB16 is further underscored by the fact that the average chlorophyll-a concentrations at MHB16 (10.5 µg/L) were (1) essentially identical to the upper [Taunton Estuary], and (2) well above the suggested 'good health' 'thresholds' EPA claimed were necessary to ensure standards compliance."

In the response to comments, however, the EPA explained that the City had "clearly overstate[d] its case with the insistence that there is 'no objective resemblance between' Mount Hope Bay and the contiguous Taunton River Estuary." The EPA then pointed out that, "[d]espite the hyperbole," those two bodies of water "are in fact a series of segments of the same estuarine system, characterized by different levels of mixing of the same two source waters, continual exchange of waters among estuarine segments, the same sources for sediment, the same climactic conditions, [and] minor differences in depth range." The EPA also adds that the City has yet to explain how or why any of these purported differences are relevant to the target nitrogen threshold that the EPA selected.

The City's objection to the EPA's reliance on data from MHB16 cannot be squared with the principle that our review of agency action must afford deference to the scientific judgments of the agency that Congress has tasked with carrying out the context-

sensitive implementation of the CWA. See Overton Park, 401 U.S. at 416. Ultimately, our recognition that "[w]here the agency follows the proper procedures and acts with a reasonable basis, both its choice of scientific data and interpretation and application of that data to real world conditions are entitled to deference," forecloses the City's challenge here. Upper Blackstone, 690 F.3d at 26. This is especially so when the City has not outlined with any specificity why the differences between MHB16 and the Taunton Estuary would make the EPA's reliance on that data indefensible.

3.

The City's final challenge is that the EPA erred in failing to take "existing conditions" in the Taunton Estuary into account in fashioning the permit's nitrogen limitation.

Having determined that a total nitrogen threshold of 0.45 mg/l was necessary to protect the Taunton Estuary from nutrient impairment, the EPA then calculated the maximum nitrogen load from the Taunton River watershed that the Estuary could receive without exceeding that threshold. After using a model to calculate the amount of nitrogen that the Estuary would receive from ocean inflows, the EPA concluded that the watershed's various sources of nitrogen could discharge 2,081 lbs. per day of that nutrient before pushing the Estuary's nitrogen concentration past

the 0.45 mg/l limit. This amounted to approximately a 51% reduction in total nitrogen loads from 2004-05 levels. The EPA then subtracted from that 2,081 lb. limit the amount of Nitrogen, 1,142 lbs., it projected would flow from non-point sources.¹⁵ This resulted in a total maximum daily limit of 939 lbs. for the EPA to allocate among the Estuary's various point-source dischargers of nitrogen.

The EPA first noted that allocating this maximum load "equitably" among the watershed's six non-minor point-sources of nitrogen would result in requiring each of those sources to limit their discharges to a nitrogen concentration between 3.4 and 3.5 mg/l.¹⁶ But, the EPA then took into account that (1) "upgrades to meet the most stringent permit limits are more cost-effective at facilities with the highest flows and the highest proportion of the load delivered to the estuary; (2) the Facility is the

¹⁵ To arrive at this number, the EPA started the average daily nitrogen load from non-point sources during 2004-05. Then, "consistent with approaches in approved [total maximum daily limits] in Massachusetts and elsewhere," the EPA reduced that number by 20% to account for "the prevalence of regulated [municipal] stormwater discharges, trends in agricultural uses and population, and potential reductions in atmospheric deposition through air quality programs."

¹⁶ The EPA did not take into account five point-sources that discharged less than one million gallons per day, explaining that they were "de minimis contributors for the purposes of this analysis."

watershed's second-largest discharger; and (3) the Facility "discharges directly to the upper portion of the Taunton River estuary, with no potential for uptake or attenuation of its nitrogen discharges." The EPA therefore found it appropriate to assign the Facility -- which has a "design flow" of 8.4 million gallons per day -- a permit limit of 3.0 mg/l. The EPA assigned the same limit on the Estuary's two other largest point-source dischargers, belonging to the towns of Brockton and Somerset. The three remaining smaller facilities received a limit of 5.5 mg/l.

The City presses that, in arriving at the final permit limit for the Facility, the EPA relied only on the SMAST data, which is from 2004-06, and as a result failed to take account of the allegedly substantial improvements in terms of dissolved oxygen and algal conditions that have since taken place in the Taunton Estuary. Those improvements, the City says, may even have obviated the need for any nitrogen limit in the permit. Specifically, the City says that the EPA failed to acknowledge the following recent developments: (1) the Taunton Estuary's temperature has decreased as a result of the closure of the nearby Brayton Point power plant; (2) the "inputs of [total nitrogen] have declined" in Narragansett Bay, Mount Hope Bay, and the Taunton Estuary; (3) "organic loadings from [combined sewer overflows] to

the upper and lower [Taunton Estuary] have declined; and (4) "algal levels in [Mount Hope Bay] have declined."

Insofar as the City challenges the facial validity of the SMAST data due to the time that had elapsed since its collection, that argument is unavailing. Our standard of review, once more, does not deputize us to second-guess the EPA's choice of data, so long as the agency acts "with a reasonable basis" in selecting and applying it. Upper Blackstone, 690 F.3d at 26. And here, as the EAB explained, the agency had good reason for relying on the SMAST data, which drew from 22 different monitoring stations: the more recent studies -- such as that of the Narragansett Bay Water Quality Network -- were "limited in terms of location and parameters monitored and thus were insufficient to form the basis for an alternative analysis of the Taunton Estuary." Moreover, the EPA did not ignore that recent data, but rather found that it was "consistent with [its] analysis of the SMAST data and indicated continued adverse water quality impacts." Further, we have recognized that "neither the CWA nor EPA regulations permit the EPA to delay issuance of a new permit indefinitely until better science can be developed, even where there is some uncertainty in the existing data." Id. at 22; see also Massachusetts v. EPA, 549 U.S. 497, 534 (2007) (explaining that the EPA cannot avoid its statutory obligation to regulate greenhouse gases by "noting the

uncertainty surrounding various features of climate change" when "sufficient information exists to make an endangerment finding"). Thus, we think that the EPA was well-entitled to use the SMAST data in the manner that it did here.

Moreover, the agency's express consideration of the four different recent developments identified by the City reinforces our conclusion that the permit's nitrogen limit was not arbitrary or capricious. With regard to the Brayton Point plant, the EPA resoundingly rejected the notion that the plant's closure should have impacted its analysis. First, it explained that while operative, the plant's thermal discharges may have "contributed incrementally to dissolved oxygen depletion in Mount Hope Bay [but], . . . extensive modeling efforts . . . were unable to quantify the impact of those thermal discharges on [dissolved oxygen] concentrations." The EPA further explained in the response to comments that the impact of the plant's thermal discharges was minimal in the Taunton River Estuary because of that portion of Mount Hope Bay's naturally elevated temperatures. And the EPA also noted that -- because thermal loads in the Mount Hope Bay had been "dramatically reduced since 2011," while dissolved oxygen depletions nonetheless persisted during that period -- the City's theory that the plant's closure had remedied

the Taunton Estuary's low dissolved oxygen levels was "unsupported by any evidence at all."

Turning to the City's next argument -- that the EPA failed to consider new data indicating that total nitrogen inputs had declined -- we note that the EAB rejected the City's claim that the agency failed to consider "potential improvements." In so doing, the EAB emphasized that in the response to comments, the EPA explained that "while some nitrogen reductions have occurred in connection with improved treatment at other wastewater treatment plants in Massachusetts, these reductions are not predicted to be sufficient to achieve the target nitrogen concentration or water quality standards."

The EPA also took up the City's submission concerning reduced combined sewer overflows in the response to comments, but concluded that those reductions "while important in addressing other pressing water quality problems, are not expected to have a significant impact on [dissolved oxygen] conditions in the upper Taunton River estuary." The EPA also explained that those reductions came nearly entirely from combined sewer overflows "located more than 6 miles downstream of the station used as the locus for the loading analysis and discharge only during wet weather, when flows from the Taunton River are at their highest

and . . . move most strongly away from the estuary." Thus, the EPA was similarly unmoved by this objection from the City.

Finally, while the City maintains that the EPA has conceded that algal conditions have improved, the EPA's engagement with that argument in the response to comments proves otherwise. There, it explained that it disagreed with the City's comment asserting that "[a]lgal levels in Mount Hope Bay have dropped significantly since 2004/05" and that "[p]eak and average algal levels are at all-time lows." That comment, the EPA tells us, attempted to draw "conclusions from a single year of variation[,] 2010, while 2009 was the highest year on record for average chlorophyll-a concentrations." And, the EPA added, the chlorophyll-a concentrations recorded in 2010, "while lower than those seen in 2004-05, are still significantly higher than the levels identified in the Critical Indicators Report as reflecting unimpaired conditions in SB waters." We, therefore, do not think that the EPA's permitting decision suffers from any failure to engage with this submission either. The City, therefore, fails to convince us that the EPA impermissibly relied on the SMAST data or neglected to consider developments that post-dated that data.

We now turn to its final contention: that, in allocating the total daily maximum nitrogen load of 939 lbs. among point-sources of nitrogen, the EPA ignored the "impact of the largest

(by far) discharger in the system" -- the City of Fall River. The EPA urges us to find this argument waived, the City having raised it only after briefing before the EAB was complete, by way of an untimely submission. But even were we to consider this argument on the merits, the outcome would be no better for the City. For, the EPA calculated the Permit's nitrogen limit based on standards governing and conditions in the Taunton River Estuary, while Fall River discharges only into the greater Mount Hope Bay. And, far from ignoring Fall River's impact on conditions in Mount Hope Bay, the EPA explained as early as in the fact sheet that "[w]hile other loads to Mount Hope Bay (particularly the Fall River [wastewater treatment plant]) will need to be addressed as well, the reduction in nitrogen loadings from the Taunton River will ensure that those discharges do not cause or contribute to nitrogen-related impairments in Mount Hope Bay.

Having considered all of the City's protestations to the contrary, we find that in calculating the Permit's effluent limit, the EPA neither relied on impermissible factors nor failed to consider a crucial aspect of the problem, and that its explanation for that limit neither flaunted the evidence in the record nor is "so implausible that it could not be ascribed to a difference in view or the product of agency expertise." Motor Vehicle Mfrs. Ass'n, 463 U.S. at 43. As the EPA's detailed explanation of how

it calculated the permit's nitrogen limit of 3.0 mg/l reveals, that limit falls within the "zone of reasonableness," and so we do not see fit to second-guess it. See Upper Blackstone, 690 F.3d at 28; see also Solite Corp. v. EPA, 952 F.2d 473, 488 (D.C. Cir. 1991). As a result, we leave undisturbed this well-reasoned exercise of the EPA's delegated authority to administer the CWA.

III.

None of the City's procedural or substantive challenges having merit, the decision of the EAB is affirmed.