BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In the Matter of:	)
City of Taunton Wastewater Treatment Plant	)
NPDES Appeal No. 15-08 NPDES Permit No. MA0100897	)

EPA REGION 1'S RESPONSE TO THE PETITION FOR REVIEW

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H	L15	Massachusetts Department of Environmental Protection, UMASS-Dartmouth School for Marine Science and Technology. 2003. Massachusetts Estuaries Project: Site-Specific Nitrogen Thresholds for Southeastern Massachusetts Embayments: Critical Indicators Interim Report. Massachusetts Department of Environmental Protection. July 21, 2003. Revised September 16, 2003 and December 22, 2003. Published Online: http://www.mass.gov/dep/water/resources/nitroest.pdfSMAST. 2007.
I	J1	MassDEP. 2012. Massachusetts Consolidated Assessment and Listing Methodology (CALM) Guidance Manual. Massachusetts Division of Watershed Management. CN 405.0.
J	K17	SMAST. 2007. Summary of Water Quality Monitoring Program for the Mount Hope Bay Embayment System (2004-06). School for Marine Science and Technology, University of Massachusetts Dartmouth. August 16, 2007.
K	K21	Stoffel, H. 2014. Powerpoint Presentation. 2014 Dissolved Oxygen Assessment – CHRP Meeting December 17, 2014.
L	M14	Environmental Protection Agency. 2001. Nutrient Criteria Technical Guidance Manual: Estuarine and Coastal Marine Waters. U.S. Environmental Protection Agency, Office of Water, EPA-822-B-01-003. October 2001. Published Online: http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/marine/index.cfm

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I. INTRODUCTION

This appeal arises from EPA Region 1's April 10, 2015 reissuance of a final National Pollutant Discharge Elimination System ("NPDES") permit to the City of Taunton, Massachusetts ("City" or "Petitioner"), for discharges of wastewater effluent to the Taunton River in Massachusetts. *Ex.A (Final Permit)*. The principal focus of Taunton's Petition for Review ("Pet") is the Final Permit's effluent limitation for total nitrogen ("TN"), which the Region was obligated to impose under the Clean Water Act ("Act") and implementing regulations upon a determination that the limit was "necessary" to achieve Massachusetts water quality standards ("WQS"), including the Commonwealth's narrative water quality criterion for nutrients.

Petitioner has misconstrued the relevant legal thresholds applicable to NPDES permit decisions, interposing two new preconditions that in its view must be satisfied before the Region may impose a water quality-based effluent limitation for nitrogen—first, proof that nitrogen is "causing" harm to the receiving waters and second, inclusion of nitrogen by Massachusetts on its CWA § 303(d) list as the "cause" of the water quality impairment in the receiving waters—even though these prerequisites are not found anywhere in the Act or regulations.

Flawed as matter of law, the Petition fares no better as to fact, procedurally defaulting by repeatedly reiterating comments made on the Draft Permit, *Ex.B*, at times verbatim, without substantively confronting and rebutting the Region's considered response, or by attempting to raise new issues for the first time at this late stage of the proceeding. Even where it manages to directly grapple with the Region's response, Petitioner is able to establish, at most, a difference of technical opinion or alternative theory on a scientific matter. Petitioner has failed to carry the

"particularly heavy burden" assigned to it in instances where the Region has exercised its considered judgment on an "inherently" technical or scientific issue, the decision to impose a nitrogen limit. *D.C. Water & Sewer Auth.*, 13 E.A.D. 714, 742 (EAB 2008). The Board should deny review of this Petition.

II. STATEMENT OF THE CASE

A. Factual and Procedural Background

The Taunton River is the longest undammed river in New England, *Ex.C (Fact Sheet, or "FS")* at 13, and is a designated Wild and Scenic River. *Ex.D (Response to Comments, or "RTC")* at 119. It is formed by the confluence of the Town and Matfield Rivers in East Bridgewater, and becomes an estuarine water at Route 24 in Taunton (upstream of the Taunton Waste Water Treatment Plant), flowing through the Towns of Dighton and Berkley before discharging to Mount Hope Bay ("MHB") at Fall River. *FS* at 13. (The estuarine reaches of the Taunton River are referred to herein as the Taunton River Estuary or "TE"). MHB is partially located in Rhode Island, and the TE/MHB system is the easternmost portion of the greater Narragansett Bay estuary system. *FS* at 12-13.

The Taunton WWTP is an 8.4 million gallon per day ("MGD") treatment facility which discharges to the estuarine portion of the Taunton River in Massachusetts. *FS* at 3.

1. Applicable Massachusetts and Rhode Island WQS

a. Massachusetts WQS

Massachusetts WQS, 314 CMR 4.00, designate the TE and the eastern portion of MHB as SB waters, which are subject to class-specific narrative and/or numeric water quality criteria.

314 CMR 4.05(4)(b)1 to 8. Dissolved oxygen concentrations in Class SB waters "[s]hall not be less than 5.0 mg/l," and such waters "shall have consistently good aesthetic value." 314 CMR 4.05(4)(b)(1).

The western portion of MHB is designated as a Class SA – Shellfishing water. 314 CMR 4.06. The DO criteria for class SA waters is "not less than 6.0 mg/L unless background conditions are lower; natural seasonal and daily variations above this level shall be maintained; levels shall not be lowered below 75% of saturation due to a discharge." 314 CMR 4.05(4)(a)(1).

Class SA and Class SB waters are subject to minimum standards applicable to all surface waters. With respect to nutrients, "all surface waters shall be free from nutrients in concentrations that would cause or contribute to impairment of existing or designated uses[.]" 314 CMR 4.05(5)(c).

Both of the estuarine segments of the TE are listed on the state's 303(d) list with impairments due to fecal coliform and dissolved oxygen, with the lower segment also listed for fish bioassessments; the Massachusetts portions of MHB are listed for impairments due to total nitrogen and chlorophyll, *inter alia*. *FS* at 4; *Ex.E* and *Ex.F* (2010 and 2012 303(d) Lists).

b. Rhode Island WQS

In addition to the Massachusetts WQS, Rhode Island WQS applicable to the Rhode Island portion of MHB must also be satisfied. 40 C.F.R. § 122.44(d)(4). As in Massachusetts, the Rhode Island portions of MHB are designated SB waters in the eastern portion and SA waters in the western portion of the Bay.

Rhode Island has specific numeric criteria for dissolved oxygen in SA and SB waters, and narrative criteria for nutrients and aesthetics. RIWQS, Rule 8.D.3, Table 3.

The Rhode Island portions of MHB are listed for impairments due to, *inter alia*, total nitrogen and dissolved oxygen. *FS* at 19; *Ex.G.*

2. Water Quality Impairments

a. Cultural Eutrophication Generally[1]

Increased nutrient inputs promote a progression of symptoms beginning with excessive growth of phytoplankton and macroalgae to the point where grazers cannot control growth. Phytoplankton is microscopic algae growing in the water column and is measured by chlorophyll-a. Macroalgae are large algae, commonly referred to as "seaweed." The primary symptoms of nutrient overenrichment include an increase in the rate of organic matter supply, changes in algal dominance, and loss of water clarity and are followed by one or more secondary symptoms such as loss of submerged aquatic vegetation, nuisance/toxic algal blooms and low dissolved oxygen.

b. MassDEP/SMAST Critical Indicators Report[2]

MassDEP has not adopted numeric criteria for total nitrogen but uses a number of indicators in interpreting its narrative nutrient standard. The DEP/SMAST Massachusetts Estuaries Project report, *Site-Specific Nitrogen Thresholds for Southeastern Massachusetts Embayments: Critical Indicators - Interim Report* ("Critical Indicators Report"), *Ex.H*, was developed to provide "a translator between the current narrative standard and nitrogen thresholds (as they relate to the ecological health of each embayment) which can be further refined based on the specific physical, chemical and biological characteristics of each embayment. This report is intended to provide a detailed discussion of the issue and types of indicators that can be used, as

[1] *FS* at 14-16.
[2] *FS* at 17-18, 21-22.

well as propose an acceptable range of nitrogen thresholds that will be used to interpret the current narrative standard." *Id.* This interpretive guidance has been used in a number of TMDLs for estuarine waters in southeastern Massachusetts, and the approach described in it is referenced with approval in the 2012 Massachusetts Consolidated Assessment and Listing Methodology ("CALM"):

> For embayments in Southeastern Massachusetts the MEP has also generated a significant amount of enrichment indicator data based on a weight-of-evidence approach that includes several response variables (e.g., eelgrass, infauna, macroalgae, chlorophyll *a*, DO, Secchi disk, TN concentrations). Since this project is intended to develop site-specific nutrient (nitrogen) thresholds for these systems, their overall analysis of habitat health are utilized to make *Aquatic Life Use* attainment decisions.

Ex.I at 21. The Critical Indicators Report provides guidance for indicators, including total nitrogen, for various water quality classes. For SB waters, the Critical Indicators Report provides the following guidance for indicators of unimpaired conditions, to be refined based on data from the specific embayments: "benthic animal diversity and shellfish productivity are high, oxygen levels are generally not less than 5.0 mg/l with depletions to <4 mg/L being infrequent, chlorophyll-a levels are in the 3 to 5 µg/L range and nitrogen levels are in the 0.39 - 0.50 range…eelgrass is not present . . . and macroalgae is not present or present in limited amounts even though a good healthy aquatic community still exists." *Ex.H* at 21-22.

c. SMAST Monitoring Study

The Region evaluated the available data concerning the TE and MHB and determined that both the TE and MHB have reached their assimilative capacity for nitrogen and are suffering from the adverse water quality impacts of nutrient overenrichment, including cultural eutrophication. The Region concluded that they are, consequently, failing to attain the WQS described above. *FS* at 19.

In 2004-06, MassDEP funded a three-year water quality monitoring study conducted by the School for Marine Science and Technology at UMass-Dartmouth ("SMAST") under the Massachusetts Estuaries Project ("MEP") framework. This study involved monthly sampling at 22 sites across MHB and the TE, and showed that average chlorophyll-a over the three year period was above 10 ug/l at all monitoring stations across the TE and MHB. The 20th percentile DO concentrations for the three year period were below the 5.0 mg/l water quality standard at four of the six sites in the TE (MHB 1, 2 and 18-21), and minimum measured DO concentrations in each year were below 5.0 mg/l at all the TE stations in 2004 and 2006, and a majority of those stations in 2005. *Id.*; *Ex.J* at 24 (SMAST MHB Monitoring Program Report). In MHB proper, minimum DO concentrations below 5.0 mg/l were encountered at all but one of the MHB stations at least once during the three year period, and at five of the ten stations in both 2004 and 2005. *FS* at 21. The Region determined that this was persuasive evidence of pervasive low DO conditions throughout the TE and MHB, given that the sampling was intermittent (and therefore unlikely to capture isolated low DO events) and was not timed to reflect the lowest DO conditions in the waterbody (just before dawn, when oxygen depletion due to respiration is greatest). *Id.* at 21-22. This conclusion was supported by analysis of data from a continuous monitoring datasonde deployed in MHB beginning in 2005 (part of the Narragansett Bay Fixed Site Monitoring Network ("NBFSMN")), which showed that DO depletions were extensive during the overlapping period of monitoring (2005 and 2006). *Id*. at 25.

Elevated chlorophyll-a concentrations are similarly pervasive based on the SMAST data. Mean chlorophyll-a concentrations are above the Critical Indicators Report guidelines for unimpaired waters (3-5 ug/l) at every station monitored, in all three of the monitoring seasons. *Id.* at 22; Ex.J at 24. Maximum chlorophyll-a concentrations are routinely above 20 ug/l, a commonly used threshold for determining algal blooms. *FS* at 22. Given the likelihood of

intermittent sampling missing the worst conditions in terms of short-term algal blooms, this in the Region's assessment was strong evidence of pervasive eutrophic conditions throughout the TE and MHB. *Id.* And once more, this analysis was corroborated by examination of continuous datasonde measurements from the overlapping period, which show extensive periods with chlorophyll-a above 20 ug/l, consistent with nutrient-fueled algae blooms. *Id.* at 25.

Total nitrogen concentrations are elevated throughout the system, with a three year average TN concentration above 0.5 mg/l at sixteen of the 22 sites and above 0.45 mg/l at 21 of 22 sites. *Id.* at 22; *Ex.J* at 24.

Based on these data, the SMAST report concluded that a MEP analysis for nitrogen loading reduction was warranted for the MHB/TE complex, stating:

> In general, the Taunton River Estuary, with its large watershed N load and high TN levels, is showing poor water quality due to its high chlorophyll and oxygen depletions. The main basin of Mt. Hope Bay, with its greater flushing and access to higher quality waters of the lower Bay, is showing less impairment with moderate water quality. Finally, the lower basin of Mt. Hope Bay, nearest the tidal "inlet," is generally showing moderate water quality. . . . [T]hese data indicate that the MEP analysis of this system should focus on restoration of the main basin of Mt. Hope Bay and the Taunton River estuarine reach, and that it is likely that restoration of the Taunton River Estuary will have a significant positive effect on the habitat quality of the main basin of Mt. Hope Bay.

Ex.J at 22.[3] The Region concurred with the conclusions of the SMAST report, which indicated poor water quality from nitrogen enrichment in TE, with more moderate impairment due to nitrogen enrichment in MHB. *FS* at 26; *RTC passim*.

Evidence of continuing impairment in MHB is provided from the NBFSMN datasonde station in MHB, which has measured temperature, salinity, dissolved oxygen and depth at approximately 1 meter from the bottom and 0.5 meters below the surface, and chlorophyll

[3] To date, the MEP analysis, has not been completed; nor has MassDEP updated its Water Quality Assessment Report for the Taunton River (the last published WQA Report is from 2001). *FS* at 24; *RTC* at 39.

fluorescence at the near surface sonde since 2005. *FS* at 24-26; *RTC* at 113-114. The sonde data corroborate the continued occurrence of DO depletions in bottom waters, algal blooms and generally elevated chlorophyll-a concentrations in surface waters, and high variability and supersaturated DO (consistent with eutrophic conditions) in surface waters in MHB through the most recently published monitoring data from 2013. *Id.*

3. Reasonable Potential Analysis

During the permit reissuance process, EPA evaluated the sources of nitrogen loading into the TE and MHB, as well as the physical, chemical and biological impacts of the nutrient loading in the receiving water. *FS* at 19-26. EPA determined that the TE and MHB are suffering from cultural eutrophication due to excessive nitrogen loading. *Id.*

EPA also concluded that excessive nitrogen loading from wastewater facilities in the Taunton River watershed, including the Taunton WWTP, has the reasonable potential to contribute to violations of WQS in the TE and MHB. *FS* at 26-29; *RTC* at 42, 81, 96. It is undisputed that municipal wastewater treatment facilities are the predominate source of the nitrogen loading in TE and MHB. *FS* at 28. EPA concluded that the average summer load to the TE in 2004-05 was 4,228 pounds per day, with 66% of that load coming from wastewater treatment plants' discharges to the Taunton River and its tributaries; nonpoint and stormwater sources made up the other 34%. *Id.* Of that amount, the Taunton WWTP contributed 610 pounds or 14%. *Id.* Upgrades to the Brockton Advanced Water Reclamation Facility completed in 2010 have reduced the total treatment plant load by about 17%. *RTC* at 63.

4. Establishment of Effluent Limitations for Nitrogen

When establishing water quality-based effluent limitations in the absence of numeric criteria for phosphorus and nitrogen, EPA looks to a wide range of materials, including

nationally recommended criteria, supplemented by other relevant materials, such as EPA technical guidance and information published under Section 304(a) of the CWA, peer-reviewed scientific literature, and site-specific surveys and data. 40 C.F.R. § 122.44(d)(1)(vi)(A); *RTC* at 35.

a. The Nitrogen Limit

The fate and transport dynamics of nitrogen in impaired estuaries are highly complex, with dilution impacted by tidal factors and uptake processes impacted by waters, sediments and the atmosphere (*i.e.*, nitrogen can be deposited by the atmosphere and can also be released to the atmosphere through biological processes). The response of a coastal ecosystem to nitrogen enrichment depends on many factors, including light availability, temperature, stratification, grazing of algae by zooplankton and shellfish, and flushing rates. EPA has not published recommended national nutrient criteria for estuarine and coastal waters. *Ex.L* (*Nutrient Criteria Technical Guidance Manual: Estuarine and Coastal Marine Waters (US EPA 2001))* at 1-8.

Absent a recommended criterion, EPA relied on the best information reasonably available to it to establish a nitrogen effluent limitation that would be sufficiently stringent to ensure compliance with the Massachusetts narrative water quality criterion for nitrogen. 40 C.F.R. § 122.44(d)(1)(vi)(A). As noted above, the Critical Indicators Report identified a range of potential nitrogen thresholds for SB waters as 0.39-0.5 mg/l, to be refined based on site-specific data. Total nitrogen concentrations previously found to be protective of DO in other southeastern Massachusetts estuaries have ranged between 0.35 and 0.55 mg/l. *FS* at 29. To determine an appropriate threshold concentration in the TE/MHB system based on site-specific data, EPA applied the procedure developed by the MEP of identifying a target nitrogen concentration threshold based on a location within the estuary where WQS are not violated, in

order to identify a nitrogen concentration consistent with unimpaired conditions. *Id.* This approach is consistent with EPA guidance regarding the use of reference conditions for the purposes of developing nutrient water quality criteria.[4] *Id.*; *Ex.L* at 6-3.

Data from the SMAST monitoring program indicate widespread DO violations at a range of TN concentrations, with multiple stations with minimum DO violations during the year with corresponding TN mean concentrations below 0.48 mg/l. *FS* at 29-30. In addition, DO concentrations from the fixed site monitoring station indicate extensive periods with DO below 5.0 mg/l in 2005 and 2006 (the datasonde was not operating in 2004). EPA considers fixed site monitoring of DO to be superior to intermittent sampling data because the continuous monitoring includes critical conditions and time periods (*e.g.*, early morning DO minima) that are generally missed in intermittent sampling. The SMAST monitoring station that is closest to the fixed site station is MHB13. The average TN concentration at MHB13 between 2004 and 2006 was 0.473 mg/l, indicating that the threshold concentration must be lower than that value. *Id.* at 30.

EPA determined that DO standards were met at Station MHB16, and that a TN concentration of 0.45 mg/l (the average of 2004-05 concentrations at that location) would therefore be used as a threshold protective of the DO water quality standard of 5.0 mg/l, noting also that this value is within the range of target nitrogen thresholds previously determined in southeastern Massachusetts embayments and consistent with TN concentration thresholds to protect DO standards identified in other estuaries. *Id.* at 29-30. EPA emphasized that the threshold was based on all the data and not a single site. *RTC* at 35, 52, 69, 81.

[4] Petitioner characterizes the Region as using a "sentinel approach," which is not a term used by the Region or others and is not defined by Petitioner. The MEP documents and the FS use the term "sentinel" stations or locations in describing the areas where the reference based condition is applied.

EPA next determined an allowable TN load from the watershed that would result in TN concentrations at or below the 0.45 mg/l TN threshold. To do so, EPA applied a steady state ocean water dilution model based on salinity. *FS* at 30. The basic premise is that steady state concentrations of nitrogen in an estuary will be equal to the nitrogen load divided by the total water flushing rate from freshwater and ocean water. Estuaries are complicated systems with variability due to tides, weather, and stream flows. However, by making the steady state assumption, it is not necessary to model all of these factors. The steady state assumption can be valid for calculations based on long term average conditions, which approximate steady state conditions. Salinity data is used to determine the proportion of fresh and ocean water in the estuary at the uppermost point determined to be nitrogen limited. Freshwater input is calculated from streamflow measurements at USGS gages in the watershed. Then, ocean water inputs are estimated using salinity measurements and the freshwater inputs. The total flushing rate is then used with the target nitrogen threshold to determine the total allowable load to the estuary. *Id.* After subtracting ocean loads, the allowable load from watershed sources was calculated to be 2,081 lbs/day. As actual loads in 2004-05 averaged 4,228 lbs/day, this requires a reduction in watershed loads of 2,147 lbs/day, or approximately 51% from 2004-05 levels, in order to meet WQS in the TE. *Id.* at 31-32.

Allocating this load among the six major POTW sources, EPA determined that the Taunton WWTP would be in the highest tier of treatment. *Id.* It is the second largest discharger to the Taunton River watershed and discharges directly to the upper portion of the TE with no potential for uptake or attenuation of its nitrogen discharges. EPA calculated a mass-based permit limit based on a limit of technology effluent concentration of 3 mg/l. *Id.* at 33.

(1) Comparison of TE and MHB

In imposing the nitrogen limit, EPA evaluated the similarities and differences among the TE and MHB sites to assess whether a less stringent (per Taunton's argument) permit limit would be protective of water quality in the TE. EPA noted that no reference location was available within the TE, as all areas of the TE demonstrated indications of cultural eutrophication. *RTC* at 96. The TE and MHB are both segments of the same estuarine system, characterized by different levels of mixing of the same two source waters, continual exchange of waters among the estuarine segments, the same sources for sediment, the same climatic conditions, and minor differences in depth range (Taunton River depths range from 4 to 10 meters; MHB from 3.5 to 12 meters). *Id.* at 48. Both segments undergo periodic stratification (which tends to magnify DO depletion effects of eutrophication due to lack of air exchange between surface and bottom waters). *Id.* at 79, 87-89. The areas differ in width and related circulation patterns. *Id.* at 48. Data plots of TN and indicator data (when corrected to include all relevant stations and exclude non-nitrogen limited stations), though of low statistical power, were consistent with EPA's interpretation of the relationship between TN and DO in the TE and MHB. *Id.* at 99. To the extent individual site characteristics of reference site MHB 16 differ more significantly from TE characteristics, this did not substantially affect the target threshold, as the threshold nitrogen determination was based on the transition in conditions among all stations of MHB, with numerous stations with demonstrated impairment at TN concentrations just above 0.45 mg/l and an additional site with less impaired conditions (MHB15) just below 0.45 mg/l. EPA concluded that the permit limit would be the same under all plausible TN thresholds. *Id.* at 96. EPA noted that there was no evidence that a higher permit limit would be protective, and that Rhode Island documents indicated a more stringent receiving water TN

threshold of 0.35-0.40 mg/l might be necessary based on the overall Narragansett Bay dataset (including the site in MHB). *Id.* at 35 n.17.

(2) Consideration of More Recent Data and Load Reductions

EPA also considered whether data more recent than the SMAST study, to the extent available, indicated any change in conditions that would alter the threshold concentration or loading analyses. *RTC* at 61-65. EPA considered whether reductions that have been achieved in untreated CSO discharges would affect the analyses and concluded they would not. EPA determined that the reductions consist primarily of routing combined sewerage to the Fall River treatment plant and new disinfection and screening facilities and that given the dilute nature of the combined flows, the level of treatment would not significantly reduce either nitrogen or BOD. *Id.* at 63-64. EPA considered whether other nitrogen reductions would change the analyses and concluded they would not. EPA determined that the nitrogen reduction to the TE/MHB system achieved to date, primarily from the upgrade of the Brockton AWRF (already accounted for in the allocation with a 3 mg/l projected TN limit for that facility), would not be sufficient to achieve standards and further reductions would be necessary. *Id.* at 61-63.

EPA also considered whether elimination of the Brayton Point Power Plant thermal discharge would change the analyses and concluded it would not; EPA determined that the relationships between increased temperature and DO saturation level would not be expected to influence the DO depletion significantly under the conditions (consistently undersaturated bottom waters and highly variable supersaturated surface waters) and locations (far removed from the thermal discharge, with the TE unaffected by the thermal plume and naturally warmer than MHB) that were important in EPA's analysis. *Id.* at 64-65. EPA's conclusions on these points were supported by the available more recent monitoring data. The NBFSMN datasonde

showed continued extensive DO depletion as well as elevated chlorophyll-a concentrations in MHB through the most recent published data in 2013 (including after elimination of the thermal discharge as of 2012); and monitoring done by Brayton Point Power Plant also indicates no improvement in DO conditions at other sites in MHB. *Id.*

Considering all of these factors, EPA concluded that there was no evidence that a less stringent limit would be protective of WQS in TE, *id.* at 61-65; 96-97, while some evidence that further load reductions might ultimately be necessary to meet standards (based on the Rhode Island projected nitrogen threshold of 0.35-0.40 mg/l). *Id.*at 35. EPA therefore maintained the TN load limit based on the 3 mg/l limit of technology for nitrogen removal. *Id.* at 96. EPA did however extend the compliance schedule for meeting that limit to ten years based on a financial capability analysis. *Id.* at 27-28.

5. Permit Proceedings

Taunton's prior permit, which did not contain an effluent limitation for TN, expired in 2006. *Ex.M* (Prior Permit). From March 20 through June 17, 2013, EPA and MassDEP solicited public comments on the Draft Permit. After MassDEP issued its CWA 401 Certification, *Ex.N*, EPA and Mass DEP jointly issued the Final Permit and RTC on April 10, 2015.

III. ARGUMENT

Two entwined—and fundamentally misguided—principles lie at the heart of Taunton's Petition and animate the vast majority of its legal and factual claims. Petitioner first insists that any decision to impose a WQBEL under Section 301(b)(1)(C) of the Act and 40 C.F.R. § 122.44(d)(1) must be founded on a causal demonstration between the pollutant discharge and a WQS excursion. Although Petitioner labors to reformulate the operative "reasonable potential" standard in an attempt to heighten the evidentiary threshold to be crossed before a WQBEL

becomes "necessary," it succeeds only in reading those two words out of 40 C.F.R. § 122.44(d)(1), and along with them the underlying "precautionary approach" to protecting water quality intended by EPA in promulgating the regulation in the first place. *Upper Blackstone Water Pollution Abatement Dist.*, NPDES Appeal Nos. 10-09 through 10-12, slip op. at 31-32 (EAB Mar. 31, 2011), *aff'd*, 690 F.3d 9 (1st Cir. 2012), *cert. denied*, 133 S. Ct. 2382 (May 13, 2013).

Petitioner then identifies another hurdle EPA must allegedly overcome before determining a WQBEL is "necessary" to achieve WQS. Under Petitioner's theory, EPA is barred from imposing a WQBEL for a pollutant if that pollutant is not identified by a state on its 303(d) list as the "cause" of the water quality impairment. Petitioner, in effect, seeks to make permitting decisions under Sections 402 and 301(b)(1)(C) of the Act beholden to listing determinations (or lack thereof, as the case may be) under Section 303(d), including associated state methodologies, *i.e.*, the CALM used in the development of that list.

Neither of these positions has any basis in the statute or regulations.

A. Applicable Legal Standards

1. To Determine That a WQBEL Is "Necessary," the Region Must Demonstrate That a Pollutant Discharge Has a "Reasonable Potential" to Cause or Contribute to a WQS Violation

In Petitioner's view, "applicable state and federal rules, on their face, indicate that limits are only imposed when the pollutant is reasonably demonstrated/projected to be *causing* the adverse impact at issue." *Pet.* at 21 (emphasis in original); 13. Petitioner contends that EPA must make a causal demonstration using site-specific information that controls for confounding factors prior to determining that a permit effluent limitation is "necessary" under 40 C.F.R. § 122.44(d)(1). *Pet.* 23-25.

Petitioner has misstated the threshold required to impose a WQBEL on a discharge containing a pollutant of concern. EPA's NPDES regulations do not require a permit writer to make causal demonstrations prior to imposing a WQBEL. *Blackstone*, slip op. at 7; *City of Attleboro*, 14 E.A.D. 398 (EAB 2009); *Town of Newmarket*, NPDES Appeal No. 12-05 (EAB Dec. 2, 2013) (Order Denying Review).[5] Petitioner ignores the legal threshold under 40 C.F.R. § 122.44(d)(1)(i) for determining the need for a WQBEL: that is, "reasonable potential." Petitioner's highly prescriptive methodology for determining whether a WQBEL is "necessary" bears no relation to what is actually required under EPA's regulations. *Compare Pet.* at 25 with 40 C.F.R. § 122.44(d)(1)(i)-(iii). Instead, "'Reasonable potential' requires some degree of certainty greater than a mere possibility, but it leaves to the permit writer's scientific and technical judgment how much certainty is necessary." *Blackstone*, slip op. at 32-33, n.29. The Board's decision in *Newmarket*, slip op. at 54 n.23, only ratified this point ("cause and effect" relationships need not be established for reasonable potential purposes). Whenever such a potential exists, a permit *must* contain effluent limits to meet WQS. 40 C.F.R. § 122.44(d)(1), (5).

As a category, as well as in their particulars, Petitioner's cause-and-effect arguments cannot form a basis for review, because they are based on the false premise that EPA was required to prove Taunton's discharge caused the impairment prior to imposing a limit and that any information used to support the limit must likewise have stemmed from actual cause-and-effect demonstrations that accounted for confounding factors. In the face of contrary regulations

[5] Petitioner contends that the First Circuit's decision in *Upper Blackstone* stands for the proposition that "causation" must be proven prior to imposition of a WQBEL under 40 C.F.R. § 122.44(d). *Pet*. at 24. Although the Court in *Upper Blackstone* may indeed have been convinced that EPA's record demonstrated that the District's treatment plant was "causing" a WQS excursion, it nowhere suggested that such a finding was necessary to impose a WQBEL. 690 F.3d 9, 33 (1st Cir. 2012).

and case law, Petitioner insists on diminishing the evidence used by EPA in its reasonable potential analysis, alleging that EPA merely "presume[d]" that nutrients were causing eutrophic effect, having failed in its view to present any "site-specific causation analysis." *Pet.* at 21 n18. Petitioner never specifies what precisely this phrase means, or what such a "causation analysis" would entail, even if required, which it is not. Even so, as described *supra* at Section II.A.2-4, and as described below, the record is replete with well-documented in-stream impairments and an abundance of site-specific information implicating the role of nitrogen in those impairments. EPA in this case met and exceeded the reasonable potential standard that would justify the need for a nitrogen limitation in the permit.

2. A Water Body Is Not Required to be Listed as Impaired Under Section 303(d) In Order for EPA to Find Reasonable Potential to Cause or Contribute to a WQS Violation

In Petitioner's view, EPA's analysis under 40 C.F.R. § 122.44(d) to determine whether a permit limit is necessary "must be based on the state's published narrative criteria guidance, if available, and seek to match the state's approach as closely as possible." *Pet.* at 13. Petitioner identifies that "published narrative criteria guidance" as the Massachusetts CALM, a document it rechristens "MassDEP's State Narrative Criteria Implementation Document." *Pet.* at 4. In order to find "reasonable potential" in the face of a hypothetically countervailing 303(d) determination, Petitioner asserts that EPA must first demonstrate why the State was incorrect by demonstrating that the pollutant of concern was "the root cause (or a significant contributor)" of the impairment. Petitioner even offers a purported proof of this theorem, presenting a side-by-side comparison of regulatory language from 40 C.F.R. § 122.44(d) with listing requirements under 303(d) and implementing regulations. *Pet*. at Att. 6.

Although intended to illustrate the purported equivalency between reasonable potential determinations under Section 301 and impairment findings under Section 303(d), Petitioner's juxtaposition shows that impairment designations are *not* made according to the same standard that governs NPDES permitting decisions. Indeed, the Region could not have done more to highlight the fundamental disparity—the words "reasonable potential" in section 122.44(d)(1)(i)-(iii) and their absence in 303(d) and implementing regulations—between the two sets of regulatory standards that the City now seeks, by ignoring, to elide. Even if the evidence is unclear that a pollutant is currently causing an impairment, under §122.44(d)(1)(i)-(iii) a limit is required if the pollutant has the reasonable potential to cause, or contribute to an exceedance of a water quality standard (*i.e.*, the permit limit may be preventative). The reasonable potential analysis does *not* require presumptive reliance on the 303(d) listing process and methodologies, as "a permitting authority has a significant amount of flexibility in determining… reasonable potential." 54 Fed. Reg. 23,868, 23,873 (June 2, 1989). EPA, in addressing the relationship between Section 301 and Section 303, emphasized the need to establish necessary permit effluent limitations to comply with WQS based on available information even if Section 303(d) determinations lag behind permitting. *Id.* at 23,878; *Blackstone*, slip op. at 32-33, n.29. While effluent limits must be "consistent with the requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA," § 122.44(d)(1)(vii)(B), there is no mention under § 122.44(d)(1)(vii) of State listing decisions pursuant to CWA § 303(d). While decisions under Section 303(d) merit consideration, to be sure, they are not determinative of whether a permit limit is "necessary" when set against the imperatives of Section 301.

Petitioner, furthermore, offers no evidence to indicate that MassDEP ever intended for its CALM to serve as a WQS guidance for translating narrative into numeric criteria, or as a substitute for a reasonable potential analysis—and why would it have? EPA is the permitting

authority in Massachusetts tasked with making such determinations. The CALM is a listing guidance. Indeed, the CALM itself states that, "The *Massachusetts Consolidated Assessment and Listing Methodology (CALM) Guidance Manual* it "was prepared to satisfy reporting requirements pursuant to Sections 305(b), 314, and 303(d) of the Federal Clean Water Act (CWA)," making no mention of forming the basis for determinations under Section 301 and 402. *Petr*. *Att.* 2 at 1. Consistent with this objective, the process schematic set forth in the CALM for consolidating reporting ends with the production of an "Integrated List of Waters," with no mention of NPDES permitting. *Id.*[6]

B. The Total Nitrogen Limit

1. MassDEP Does Not Dispute That the TE Suffers From Nutrient-driven DO and Algal Impacts

Petitioner's contention that EPA is precluded from issuing a WQBEL for a pollutant that does not appear as the cause of an impairment on MassDEP's Section 303(d) list is legally unfounded. *Supra* Section III.A.

Embedded in that theory is Petitioner's more specific contention that EPA overrode "repeated" determinations by the Commonwealth and EPA in the 303(d) listing and approval process that the Taunton River is not impaired for nutrients, and that EPA's permitting action to impose a WQBEL is "blatantly inconsistent with MassDEP's § 303(d) list," *Pet*. at 15. In

[6] The task of excising the "reasonable potential" standard and supplanting it with a cause-and-effect standard and the CALM is a difficult one, indeed, and leads Petitioner further and further afield from section 122.44(d)(1)(i)-(iii), the provision governing whether a permit effluent limitation for nitrogen is "necessary." In seeking to pivot away from that provision, Petitioner relies on 40 C.F.R. § 122.44(d)(1)(vi)(A)." *Pet.* at 5-6. The problem for Petitioner is that under NPDES regulations, determinations of whether a WQBELs for a pollutant is needed, or is "necessary," are not made under subsection (d)(1)(vi) but under 122.44(d)(1)(i)-(iii), providing Petitioner with no escape for the reasonable potential standard.

advancing this theory, Petitioner seizes on the lack of any express reference to nutrients in the impairment designation in the 2010 listing document—"organic enrichment/low DO"—and the fact that other, upstream segments have been designated as nutrient impaired. From this, Petitioner infers that MassDEP, using the CALM, *affirmatively* determined that that nutrients were not the cause of DO impairments in the Taunton Estuary. *Pet. passim*. Petitioner conjectures that the DO problem in the Taunton Estuary stems from oxygen demanding organic matter, of unknown origin, rather than nutrient-driven eutrophication.

Petitioner's use of an ambiguously-phrased listing designation to project a position on the Commonwealth that it has never taken and that is nowhere reflected in the Administrative Record—and to then bootstrap that illusory conclusion onto EPA through its approval role in the 303(d) process—is speculative and unconvincing. Although Petitioner insists that EPA is compelled to draw the same negative inference that Petitioner itself draws from the ambiguous phrase "low DO/organic enrichment," this conclusion is not supported by the record. First, while Petitioner predicates its textual interpretation of the 2010 303(d) list on the phrase "organic enrichment," it fails to note that MassDEP changed wording of the impairment designation simply to "low DO" on the 2012 list. Also implicit in Petitioner's argument is that MassDEP performed a comprehensive assessment of the evidence regarding nutrient impairment in the Taunton Estuary and excluded nitrogen as a cause of the impairment. But this assumption is unwarranted. There is, in fact, no state analysis that conflicts with or disputes EPA's reasonable potential determination. MassDEP follows a rotating watershed monitoring and assessment schedule that does not allow for new assessments to be completed for every watershed in each listing cycle. *RTC* at 38, 40-41; Ex.E (*MA 2012 Integrated List of Waters)* at 301. The last

Taunton River Watershed Assessment Report was completed in 2001. *RTC* at 38.[7] The information EPA utilized to determine the reasonable potential for the discharge to cause nitrogen-driven eutrophication in the TE was not available at that time. The fact is that MassDEP has not contradicted EPA's conclusion that the nutrients are causing DO impairments and other eutrophic effects in the Taunton Estuary. *RTC* at 40-41. On the contrary, MassDEP issued the state permit with *identical* limits.

In any event, EPA carried out a site-specific analysis using data from the Taunton Estuary and determined that a permit limit was "necessary" independent of the 303(d) listing. The administrative record demonstrates that EPA drew no conclusions from the listing document other than the fact that Taunton River suffers from a DO impairment. *RTC* at 36-37. EPA drew that same conclusion from the available monitoring data, including the SMAST Report. EPA never claimed that the 303(d) listing showed a nutrient impairment; EPA's conclusion on that issue is based on the other available information. *Id.*

2. The TN Limitation Accounted for Current Data/Existing Conditions

Petitioner alleges that EPA failed to conduct an analysis of all the water quality data, analysis and modeling available to it, on the mistaken belief that "the TN limitation imposed on Taunton was based on the evaluation of data that were collected in 2004/05 and no consideration of subsequent improvement in effluent quality throughout the system." *Pet*. at 17.

Contrary to Petitioner's allegation, EPA considered all the data available for this system, including more current and detailed data on the improvement in effluent quality, such as the

[7] http://www.mass.gov/eea/agencies/massdep/water/watersheds/water-qualityassessment-reports.html.

actual location and BOD concentrations of CSO discharges, *RTC* at 63-64, and the actual reduction in nitrogen loads to the Taunton River, *id.* at 61-63. EPA also considered the water quality data post-dating 2004/05 regarding indicators of nutrient enrichment (DO and chlorophyll-a), though limited to MHB, and found them consistent with EPA's conclusions regarding the necessity for, and extent of, the nitrogen reductions mandated by the Permit. *Id.* at 58, 65, 113. EPA also concluded, however, that the more recent data are insufficient to do an alternative analysis to determine necessary nitrogen reductions as there is only a single site (a station in MHB) where eutrophication indicators are measured. *Id.* at 58, 65, 107. In EPA's assessment, the only conclusion that can be drawn from the single site is that MHB still suffers from nitrogen driven eutrophication, based on high chlorophyll-a concentrations and associated DO depletion. EPA further concluded that these limited data could not support an alternative loading model. *Id.* Petitioner labels this conclusion as an "excuse," *Pet*. at 17, but does not offer any compelling justification for why EPA's assessment of the available dataset was in error. Taunton, furthermore, has not identified how these more recent data actually undermine EPA's conclusion; it merely asserts that EPA has failed to consider them sufficiently. Finally, Petitioner does not proffer any new water quality data that might call EPA's technical assessment of the available data in the administrative record into question.[8]

[8] The list provided by the City as Att. 67 contains no "more recent water quality monitoring" efforts regarding nutrients and indicators of nutrient enrichment (DO and chlorophyll a) and is limited to hydrodynamic and hydrothermal modelling (from 2005-08) and three letters critiquing EPA's analysis, with no additional or more recent data, which were produced well after the public comment period closed (one after the final permit issued). The hydrodynamic models cited do not address nutrients or eutrophication indicators such as DO or chlorophyll-a. The Region used a longer timeframe model that considered conditions averaged over multiple tidal cycles to calculate seasonal loads, and therefore did not assess the dynamic tidal conditions explored in the hydrodynamic models. This choice was explained in the FS. *FS* at 30. Taunton did not cite these hydrodynamic studies in its comments, or explain how they would change EPA's conclusions regarding necessary load reductions.

Petition also points to nitrogen load reductions elsewhere in the estuary as a reason to forestall imposition of Taunton's nitrogen limitation. *Pet.* at 18. Petitioner's argument is merely that the cited reductions "had to materially improve the conditions," *id.* at 19 n.15, with no evidentiary support that they actually have improved conditions. As EPA explained, the reductions are not as great as Taunton claims, particularly in the Taunton River, and are not expected to be sufficient to warrant a less stringent TN limitation for Taunton than the one included in the Final Permit. *RTC* at 61-65. The available recent data support EPA's conclusions in this respect. *Id.* at 58, 61-65, 113. EPA's disagreement with Taunton's conjecture regarding the more recent data does not equate to a "failure to assess," *Pet.* at 19 n. 15, those data.

Petitioner further contends that since the 2004/05 data were collected DO and algal conditions have improved, and provides four examples. *Id.* at 18. Although Petitioner represents that each of these examples have been "admitted" or "conceded" by EPA, this is untrue. As to Petitioner's view that oxygen-demanding CSO contributions to the Taunton Estuary have dropped considerably, EPA concluded, *inter alia*, that the vast majority of the reduction in untreated CSOs has been to MHB, not the TE. Further, since those reductions involve treatment rather than elimination through separation, and the incoming CSO flows are lower in BOD than the treated discharge, there is no evidence of significant BOD reduction. *RTC* at 64.

Petitioner also claims that EPA admitted that the TE is more sensitive to oxygen demand loadings than MHB. EPA made no such statement. Rather, the reference is to charts plotting DO against chlorophyll-a (not oxygen demand loads); after first qualifying its conclusions by noting that regressions of these data are not very meaningful, EPA explains that to the extent they show relationships at all, they indicate the TE is more vulnerable to DO depletion from chlorophyll-a than MHB. *Id.* at 95-96.

Petitioner next claims that thermal reductions associated with the Brayton Point power plant have had a significant effect on the temperature of the TE and MHB, which in turn would be expected to reduce algal growth and improve DO saturation. EPA, once again, concluded otherwise based on monitoring in MHB indicating that the thermal reductions have not improved DO and that there are still high chlorophyll-a levels. *Id.* at 65. Moreover, there is not expected to be any thermal reduction in the TE from elimination of the Brayton Point thermal discharge. *Id.*

Finally, Petitioner posits that algal levels in the TE, as well as the incoming TN loads to both MHB and TE, have decreased considerably in the last eight years due to nutrient reduction efforts in Rhode Island and Massachusetts. EPA did not "concede" this; there are no data on algal levels in the TE; and aside from TN reductions from Brockton, which are accounted for in the analysis, nothing in the record shows TN loads to TE and MHB have gone down significantly. *Id.* at 61-63.

3. EPA's Use of a 3-5 ug/l Chlorophyll-a Criterion Range Was Appropriate

Petitioner's erroneous allegation—that "EPA was *required* to use the CALM document to determine the need for a TN limitation, and to mirror MassDEP's intended approach for narrative criteria interpretation"—is generally addressed *supra* at Section III.A.2. As EPA has explained, it is not required to use a CALM document to determine whether a WQBEL is "necessary."

Petitioner also makes a derivative claim of error based on this same false premise. Petitioner alleges that EPA "created a different procedure that has not been accepted by MassDEP (use of a 3-5 ug/l chlorophyll-a criteria based on the SMAST Critical Indicators Report)[.]" *Pet*. at 20. As a threshold matter, Petitioner did not raise this allegation in comments

below. It is at any rate untrue and does not present any basis for review. EPA did not use a 3-5 ug/l chlorophyll-a as an instream target; indeed, if it were applied in the manner suggested by Petitioner, such a range would require significantly lower permit limits than actually imposed. Rather, ranges of chlorophyll-a concentrations are one of a number of indicators considered in combination to assess eutrophication, and that is how EPA used them in its assessment. *FS* at 21-26; *RTC* at 41-42.

4. EPA Demonstrated That the City's Nitrogen Discharges Have a Reasonable Potential to Cause a WQS Violation

Petitioner objects to EPA's reasonable potential analysis, which it labels the "no site-specific causation" method, because it purportedly failed to show any relationship between nitrogen, algal growth and DO impacts in the TE. *Pet*. at 21-25.

Petitioner has simply recycled its previous objections—a lack of causal demonstration, including a confounding factors analysis—without addressing EPA's responses. *Compare RTC* at 46, 51-52, 90, 98-100 *with Pet.* at 21-25. Petitioner's implication that EPA failed to consider site-specific information assessing the relationship between nitrogen discharges and eutrophic impacts in the TE is belied by the record, as described *supra* at Section II.A.2-4.

5. Inclusion of New Evaluations and Data in the RTC Did Not Warrant Reopening Comment Period

Taunton next asserts that, by adding materials to the record in response to comments by Taunton, EPA was required to reopen the public comment period to give the public an opportunity to comment on such materials. *Pet.* at 25-27. Taunton also complains of documents released to it in response to its FOIA requests (and the timing of that release) and claims that the FOIA documents, released as they were after permit issuance, constitute "*post hoc* rationalizations to support [EPA's] permit action." *Id.* at 26.

EPA must "respond to all significant comments" and may place "new material" into the administrative record in response to "new points raised or new material supplied during the public comment period." 40 C.F.R. §§ 124.17, 124.18(b)(4). Furthermore, EPA regulations provide that, if any comments raise "substantial new questions concerning a permit, the Regional Administrator may" decide to reopen the comment period, 40 C.F.R. § 124.14(b)—a decision the Board reviews under an abuse of discretion standard and to which it will ordinarily defer.

Taunton fails to demonstrate that EPA abused its discretion by responding to specific comments raised by Taunton during the public comment period and not reopening the comment period. First, Taunton does not point to any proposed permit conditions that were changed or any new permit conditions developed in response to these comments; none was. Second, new materials and information provided or referenced in the RTC were included *in direct response to specific claims raised by Taunton*. EPA did not "unveil" new analyses, *Pet.* at 25, but rather carefully analyzed each of the specific claims Taunton itself raised in its comments and explained how each was flawed and, thus, did not change EPA's overall conclusions.[9] *E.g.*, *RTC* at 2-4, 58-65, 85-89, 89-97, 97-114. Third, although Taunton may disagree with EPA's explanations, Taunton has not alleged that EPA did not adequately explain its reasoning such that Taunton was prevented from developing its appeal. *Pet.* at 25-27.

Taunton has also mischaracterized EPA's release of documents in response to a FOIA request and EPA's reliance thereon. *Id.* at 26. None of the documents released was added to the administrative record after permit issuance; EPA's response indicates that those materials that EPA considered or relied upon for the permitting decision were already in the administrative record. *Petr. Att.* 66, at 1-3. Thus, Taunton's claim that the FOIA-released materials constitute

[9] Petitioner's assertion that the Region "made new (conclusory) claims," *Pet.* at 25, is contradicted by the record. *E.g.*, *FS* at 29; *RTC* at 61 n.23.

"*post hoc* rationalizations" for the determinations made in the permit is unfounded and, in fact, contradicted by Taunton's own citation. *Pet.* at 26 (citing *Petr. Att.* 66). Furthermore, nothing prevented Taunton from reviewing the Administrative Record before or immediately after permit issuance, which it declined to do. *Petr. Att*. 29 at 2.

6. Taunton's Late-Filed Comments

Taunton contends that EPA clearly erred by not directly responding in the RTC to "supplemental comments" filed by it long after the close of the public comment period. *Pet.* at 27-29. Taunton, acknowledging that its comments were late, asserts that they should nonetheless be considered timely, because, in Taunton's view, the information submitted either did not exist during the comment period or the need for the comments did not become clear until post-comment period discussions between Taunton and EPA. *Id.* at 28.

The Board has noted that a permitting authority is under no obligation to even *consider* comments received after the comment period, let alone respond to them. The only relevant inquiry here into whether comments are "timely," is whether they were filed during the comment period. 40 C.F.R. § 124.17(a)(2); *RTC* at 1 n.2. To the extent information is not available during the public comment period, that fact may go to issue preservation, but it does not go to timeliness. Thus, Taunton's claim is simply unsupported by law.

Insofar as Taunton asserts that EPA "ignored" its late-filed comments or that, by not directly responding to Taunton's supplemental comments in the RTC, did not consider them, *Pet.* at 28-29, Taunton is further mistaken. Even if this claim were true, it would not constitute grounds for reversible error. Nonetheless, in this case, EPA considered the late comments, *RTC* at 1 n.2; *Ex.O* (Memoranda to File re Supplemental Comments) and added them to the Administrative Record. EPA is not required to expressly address supplemental materials

submitted by Taunton when the issues have been substantively encompassed by positions articulated in the permit record.

7. The CWA Authorizes EPA to Implement Narrative WQS Using a Reference-based Method

Petitioner asserts that EPA's TN threshold determination is based on a consideration of water quality monitoring data collected over a three year period (2004 – 2006) from a single location in MHB—sampling station MHB16. *Pet*. at 29. In Petitioner's opinion, the site selection process was inappropriate, as it is remote from the discharge (11 miles) and is subject to differing hydrodynamic characteristics than the rest of the system, and is moreover inconsistent with other literature in the Administrative Record. *Id.* Based on correspondence with a researcher at MEP after the permit was issued, Petitioner also states that the use of this sentinel station was invalid. *Id.*

The argument that EPA's approach to selecting a reference location was inconsistent with the MEP process was not presented anywhere below, and is accordingly waived. Petitioner's allegation that EPA waited until issuance of the Final Permit to indicate that its threshold nitrogen concentration determination was modeled on the MEP procedure, and that therefore it was justified in waiting until after Final Permit issuance to raise an issue with EPA's consistency with the MEP procedures, is false. *FS* at 29.

On the merits, Petitioner's characterization of EPA's analysis is incorrect, as discussed in the RTC, which Petitioner does not confront. EPA did not rely only on the single site MHB16 in setting the TN target. Rather, EPA examined the transition in eutrophic conditions and TN concentrations throughout the estuary and noted that there were clear impairments at multiple sites where TN concentrations were just above 0.45 mg/l, with a transition to improved conditions at MHB 16 and MHB 15. *Id.* at 30; *RTC* at 35, 77-79, 96-97.

Petitioner also cites to post-permit issuance correspondence with Dr. Brian Howes, the MEP Project Leader, who criticizes EPA for the selection of MHB16 as the "sentinel station" for the TE. Petitioner's reliance on this extra-record document is procedurally barred,[10] and even if the content of the letter is construed as argument, it is still unconvincing.[11] Dr. Howes' criticisms are based on the same mischaracterization of EPA's analysis that EPA refuted in the RTC, a response Petitioner has chosen to ignore. Dr. Howes also offers no alternative path for reducing nutrient loading to the TE other than offer to undertake any additional modeling and studies that the Commonwealth or the City might in the future underwrite. The target nitrogen threshold was not based simply on MHB16 but on the continuum of conditions within MHB, including multiple sites with TN concentrations just above 0.45 that showed clear impairment. *FS* at 30; *RTC* at 35, 77-79, 96. Thus, as also explained in the RTC, even if MHB16 were removed from the analysis because of unique hydrodynamic conditions at this site as noted by Dr. Howes, the data indicate that the threshold nitrogen concentration would still be less than 0.47 mg/l and the same permit limit would be set for Taunton. *RTC* at 96.

8. EPA Did Not Factually Err When Imposing the TN Limit

a. Selection of the Sentinel Site and TN Target

As in its comments, Petitioner's criticism over EPA's selection of the reference site and derivation of the TN target on appeal mischaracterizes EPA's analysis as limited to a single site.

[10] The administrative record in an NPDES permit proceeding closes at the time the permit is issued and documents submitted thereafter generally "cannot be considered part of the administrative record." *Dominion Energy Brayton Point Station, LLC (Dominion I)*, 12 E.A.D. 490, 519, n.44 (EAB 2006).

[11] Petitioner declines to include the letter sent *to* Howes, so it is unclear what characterization, or mischaracterization, of EPA's actions he is reacting to.

Supra Section III.B.7. Although EPA addressed Petitioner's general allegation in the RTC, along with each of the particulars (physical, hydrodynamic and organic loading differences between station), Petitioner entirely ignores EPA's response.

b. Algal Growth in TE

In its comments, Petitioner claimed that growing season algal levels in the Upper Taunton River were lower than the reference site, citing to Table 5 of the FS. In response, EPA explained that Table 5 does not show that algal levels are lower in the Upper Taunton River in normal years because the three year averages shown in Table 5 are depressed by values from the extreme wet year 2006. *RTC* at 81. Taunton ignores EPA's response on this issue.

Petitioner for the first time on appeal claims that this 10 ug/l algal level would meet a 5 mg/l DO standard, relying on a University of Rhode Island Powerpoint presentation. *Petr. Att.* 16. Petitioner failed to preserve the arguments it now makes on its Attachment 16 (a full copy of that document as included as *Ex.K*). On the merits, Taunton's interpretation of the chart from that document is incorrect. The chart shows *seasonal average* chlorophyll-a of 10 ug/l roughly corresponding to a *seasonal average* DO of 5 mg/l based on data from the NBFSMN (one station in MHB, the rest in Narragansett Bay proper). This is not protective of the Massachusetts WQS, which requires that DO be $\geq$ 5.0 mg/l at all times, not as a seasonal average. Taunton also mischaracterizes Attachment 16 as "EPA's new data analysis"; the data are from the NBFSMN monitoring program and the chart was created and presented at a workshop by URI personnel. *Ex.K* at 1.

c. Hydrodynamics of Narragansett Bay Loads

Petitioner's arguments that EPA's loading analysis was incorrect in failing to account for the hydrodynamics of loading from Narragansett Bay proper is both waived and factually incorrect. *Pet.* at 33-34.

The hydrodynamic studies listed in the Petition at 33 (*e.g.*, Kincaid, 2006, *et al*) are cited by the City for the first time on appeal, as is the argument that those studies support a claim that reductions in loading to Upper Narragansett Bay (the Providence and Seekonk Rivers) had a significant impact on conditions in the Taunton River.[12] Petitioner's attempt to characterize these claims as "undisputed" or representing a "failure to understand" the system does not excuse its failure to make these arguments in a timely manner.

In any case, as a factual matter this argument is incorrect. As EPA stated in the RTC, the available data indicate that MHB is a net transporter of nitrogen to Narragansett Bay proper, rather than *vice versa*, so that reductions to loads in Narragansett Bay proper are not expected to result in discernible improvement in MHB. *RTC* at 61-62 n.22. Petitioner's arguments to the contrary are incorrect. Flow into MHB from Narragansett Bay proper consists of RI Sound waters entering via the East Passage; whereas nitrogen loads (and reductions thereto) in Narragansett Bay are to the upper tidal river segments and, due to counter-clockwise circulation in Narragansett Bay, generally exit the Bay via the West Passage rather than the East Passage (limiting export to MHB). *Petr. Att.14*, Attachment C at 7 (Krumholz 2012 (Ph.D dissertation,citing Kincaid, et al. 2008)).

Further, Taunton is again misreading its Att. 16 (Ex.K), which is not "EPA's analysis" but a URI Powerpoint presentation. At station PP (the closest Narragansett Bay station to

[12] While "hydrodynamics" are mentioned in the timely filed public comments, the references are in the context of factors influencing the DO regime and the suitability of MHB16 as a reference station and did not concern Narragansett Bay influences.

MHB), the lowest number of dry weather DO exceedances was in 2005 and the lowest number of wet weather exceedances was in 2004; there is no apparent pattern of improvement (unlike elsewhere in Narragansett Bay). *Ex.K* at 6, 7. That document does not address changes in algae at that station. The conditions at station PP are consistent with EPA's conclusion that upper Narragansett Bay load reductions would not be expected to significantly impact MHB conditions; conditions are relatively good at that station because it is highly influenced by incoming tides through the East Passage and there has been no discernible change there from reductions in Upper Narragansett Bay loads.

d. EPA Rationally Evaluated All Available Algal Growth Data

Petitioner alleges that EPA's assessment of available algal growth data was inconsistent and incomplete. *Pet*. at 34. This claim is not supported by the record. EPA concluded that the available data showed, consistent with its predictions, continued algae blooms in MHB after the TN load reductions from the Brockton facility in connection with the 2010 upgrade. EPA did not assess whether there was a statistically significant trend (too few years of data), but noted that Taunton's claim of algae reductions was based on a single year (2010) while 2009 had the highest seasonal average chlorophyll on record. The RTC also noted that the 2013 monitoring data shows highly elevated chlorophyll with the highest peak day concentration since 2006. *RTC* at 112-13. Thus EPA noted that, while small reductions in algae growth would be consistent with its analysis given the reduction in Brockton loads, the available evidence was inconclusive as to whether there had been any reduction at all, and it was clear that eutrophication impacts were continuing in MHB. *Id.* There are no more recent algae data for the TE, and EPA at no time implied that there were. EPA's discussion of NBC data is limited to nitrogen data, and EPA

specifically noted that NBC is not monitoring eutrophication indicators. *Id.* at 61-63, 108. Thus EPA rationally accounted for the available inconclusive data regarding algal levels.

e. Methodologies for Selecting a Reference Site and Deriving a Protective TN Target

Petitioner alleges that EPA's approach to selecting a reference site was inconsistent with both the MEP and EPA's Nutrient Estuarine Guidance. *Pet.* at 34-35. In Petitioner's view, EPA's claim to the contrary is "conclusory." *Id.* at 34.

To the contrary, EPA described the procedure it followed in detail in the FS and RTC (*FS* at 29-30; *RTC* at 50, 54-55, 77-78) and explained how it relates to the reference-based MEP approach. Taunton's disagreement with this approach does not render EPA's explanation "conclusory."

The MEP and reference waters approaches do not require that data be sufficient for a statistical stressor-response analysis. Taunton provides no support for that statement and it is inconsistent with the criteria guidance manuals which provide a number of alternative approaches. *RTC* at 54-55; *Ex.L* (Nutrient Estuarine Guidance)

EPA addressed the difference in hydrodynamics at length in the RTC. Taunton's argument is generally premised on a mischaracterization of EPA's approach, as described above, and does not address EPA's response to the comments. *RTC* at 35, 77-79, 96-97.

Taunton's comment regarding "reference waters" approaches claimed that EPA was required to identify a specific numeric target for algae growth linked to the specific level of DO improvement. *Id.* at 80. EPA did in fact respond to that comment, stating that it disagreed with the contention, that it was unsupported by citation, and that the MEP approach did not require specification of a target chlorophyll-a concentration. *Id.* at 80-81. Taunton's belated quotation

from the *Nutrient Estuarine Guidance*, *Pet.* at 35, also cannot reasonably be read as mandating identification of a specific chlorophyll-a target.

f. Sufficiency of Data and Stressor Response

Petitioner alleges that EPA has conceded that the available SMAST data were insufficient to evaluate TN impacts on the TE. *Pet.* at 35. Relatedly, Petitioner faults EPA for failing to conduct a specific type of statistical analysis—stressor-response—to assess any impacts of nitrogen on DO and algal levels, viewing that decision as irrational and unsupported in light of the fact that EPA's analysis could be rephrased as considering the impacts of stressors (nutrients) on eutrophic indicators (responses). *Id.* Petitioner also claims that EPA admitted that the TE and MHB respond differently to nitrogen inputs, calling its selection of a reference site from MHB into question. *Id.*

Petitioner's contentions are meritless. EPA did not state that the data were insufficient to evaluate the effects of TN on the TE, only that a "stressor-response" statistical analysis was inappropriate because the monitoring was not designed for that purpose, there were too few data points, and the resulting regression analysis would therefore be statistically invalid. *RTC* at 51-52, 90-95, 99-100. The term "stressor-response analysis" is not a general description of any analysis where pollutants are linked to impact, but a specific reference to a type of statistical analysis using regressions between various parameters. *Id.* at 54-55. EPA's conclusion that a pollutant causes an impact does not become a "stressor-response analysis" simply because Petitioner uses the words "stressor" and "response" to describe it. Nor does it mean that none of these data can be used for any purpose; EPA's criteria guidance includes a number of different approaches for criteria setting and certainly does not require or imply that any data that are not

sufficient for a statistical regression analysis must be disregarded.[13] *Id.*; *Ex.L* (Nutrient Criteria Technical Guidance).

EPA found specific problems with the plots provided by Taunton purporting to support Taunton's claims that there was no relationship between DO, nutrients and algal levels in the TE as opposed to MHB, concluding that they were based on a selective use of data. *Id.* at 91-93, 99. Taunton does not address EPA's discussion of these issues.

g. Petitioner Mischaracterizes EPA's Position Regarding the 2006 Data

Petitioner alleges that EPA characterized a set of water quality data from 2006 as inappropriate for use, but subsequently used these data in its analysis. *Pet*. at 36.

EPA never stated that the 2006 data were invalid or could not be used for any purpose. Rather, EPA concluded that 2006 data were not appropriate for use in a particular analysis, *i.e.*, in its loading analysis because the high flows that year were not typical and invalidated the steady state assumption of its mass balance analysis. *FS* at 26; *RTC* at 94-95, 99. Where EPA did utilize the 2006 data, it explained its rationale for doing so—an explanation Petitioner does not challenge. *RTC* at 93 n.28. Moreover, EPA did not use these data plots to justify its imposition of a TN limit. They were provided to refute Taunton's data plots, which EPA found to be based on a selective use of data. *Id.* at 94-96, 99-100.

h. Petitioner Failed to Preserve Arguments Concerning Brayton Point Thermal Load Reductions

[13] This section also addresses Petitioner's overlapping stressor-response arguments in Section IV.D.viii.j.

Petitioner claims that EPA misevaluated thermal reductions from the Brayton Point Power Plant, underestimating both the extent and duration of resultant DO improvements, a claim addressed *supra* at Sections II.A.4.a.2 and III.B.2

i. Post-2006 Data

Petitioner contention that EPA failed to adequately consider post-2006 data in its permitting determinations is misplaced. EPA's FS included the more recent data that were available as of the time the FS was published (sonde data through 2010). *FS* at 26. More recent data have been assessed as they became available to EPA and were considered in the RTC, including sonde data through 2013. *RTC* at 113-14. EPA reviewed each of the improvements noted in the comments (and restated in the Petition) and concluded that they did not change the permit analysis, because they are not expected to be sufficient to warrant a less stringent TN limitation for Taunton than the one included in the Final Permit. *Id.* at 61-65. The recent monitoring data was consistent with that analysis. *Id.* at 61-65, 117-18.

9. Year-Round Nutrient Reduction

Petitioner objects to a condition of the Final Permit requiring year-round operation of its nutrient reduction controls, alleging that "EPA's Fact Sheet contained no justification for the year-long condition" and that "EPA's Response created a rationale, for the first time, implying that there was a need to operate the facilities year round due to concerns over nutrient cycling in the estuary." *Pet*. at 38-39.

In the FS, EPA did more than "imply" a concern over nutrient recycling in estuaries—it explicitly articulated that rationale as a basis for year-round nutrient controls. *FS* at 14. The Draft Permit, as in the Final, required Taunton to "operate the treatment facility to reduce the discharge of total nitrogen during the months of November to April to the maximum extent

possible." Part I.A.1 footnote 12. Petitioner's allegation that the FS contained no justification for the condition is contradicted by the record: citing to EPA's *Nutrient Estuarine Guidance*, EPA explained that "waterborne pollutants, along with contaminated sediment, may remain in the estuary for a long time, magnifying their potential to adversely affect the estuary's plants and animals," requiring the nitrogen controls to address loadings beyond the critical low flow conditions when eutrophic effects are most acute. *FS* at 14. In its RTC, EPA reaffirmed this reasonably conservative approach to nutrient permitting. *RTC* at 19. Petitioner's objection, based as it was on an inaccurate depiction of the FS, cannot serve as a basis for review. Finally, Petitioner objects to the limit on the ground that no similar requirement has been imposed on "anyone on Long Island Sound," an incongruous and factually incorrect assertion[14] that was not raised during the public comment period; and even if true, a mere disparity in permit limits between facilities is not by itself a matter warranting review.

C. Compliance Schedule

Taunton next asserts that EPA's decision to include a compliance schedule for meeting the permit's nitrogen limits in 10 years, rather than 18, was "a clear mistake of fact and law," because, argues Taunton, EPA based its rejection of Taunton's request for a longer schedule "on deficiencies with the *original* submission rather than the *updated* submission." *Pet.* at 39.

The basic premise of the City's argument is untrue; the Region did not ignore any "updated" submissions. The Draft Permit contained a 5-year compliance schedule. *Ex.B* (Draft Permit) at 18-19; *FS* at 34. The City commented, among other things, that the schedule should be lengthened. *RTC* at 22-24. In response, EPA reviewed financial data submitted by Taunton

[14] *See, e.g.*, http://www.ct.gov/deep/lib/deep/water/municipal_wastewater/2011_2015_nitrogen_gp.pdf.

with the original comment, reviewed further data and information from additional Taunton submissions, analyzed it pursuant to relevant EPA guidance, and doubled the length of the compliance schedule to 10 years. [15] *Id.* at 24-29; *Ex.A* (Final Permit) at 18-19. In making this determination, EPA noted that, although "additional calculations" provided by Taunton in March 2015 "increased th[e projected] cost" of WWTF improvements by $3 million to $98.3 million, Taunton "did not provide detailed debt burden impacts" for this larger figure. *RTC* at 26 n.14. Moreover, EPA estimated "the potential impact [of the increase] as approximately $10/household," noting that "this change would not impact the conclusions in this response." *Id.* Furthermore, the March 20, 2015 supplemental comments include an attached worksheet that lists, by comparison, total costs of $140.8 million without any explanation—costs that include for the first time additional tens of millions of dollars in MS4 compliance and unspecified sewer improvements and pump station improvements. *Ex.P* (3/20/15 Supp. Comments) at 20-37. Contrary to Taunton's assertions, EPA did not simply "ignore" the last-minute information. EPA reviewed it, but decided not to rely on it for the affordability analysis, because the "new cost estimates represented a significant increase over previous cost estimates" and were not supported or explained in any way. *Ex.O* at 13 (File Memorandum re March 20, 2015 supplemental comments). Thus, Taunton's claim is simply unfounded. EPA rejected Taunton's request for an 18-year schedule based on deficiencies with the analysis Taunton submitted to support that schedule. Furthermore, the Region noted that, "[i]f at any time actual average household sewer rates are shown to be significantly higher than EPAs projected rates, the City can seek a revised schedule based on affordability considerations." *RTC* at 28.

[15] Moreover, the State has endorsed the 10-year schedule, including it in the State permit. *See also Ex.N* (Section 401 cert.) at 1.

D. Copper

Taunton asserts that EPA's decision to base the permit's copper effluent limitations on the 7Q10 flow of the Taunton River without factoring in any tidal dilution is clearly erroneous and that EPA's response to Taunton's comments on this point is "irrational." *Pet.* at 39-40. To substantiate this claim, Petitioner provides a brief list of unsupported and largely unexplained "reasons" why EPA's response is inadequate. *Id.* at 40.

Taunton commented that a tidal flow of 1,192 cfs containing what Taunton "assumes" is a "negligible" concentration of copper should be factored into the copper limit calculations, which, Petitioner argued, would result in a copper limit of 347 µg/l. *RTC* at 117. (As a comparison, EPA had calculated copper limits of 8 µg/l (avg. monthly) and 15 µg/l (max. daily), based on a 7Q10 flow of 33.2 cfs).[16] *Id.* at 118. EPA responded by noting that the tidal flow analysis advanced by Taunton appeared to be based on the analysis EPA performed for nitrogen, which in turn was based on long-term seasonal average concentrations at a point several miles downstream of the discharge. *Id.* EPA explained, however, that such an approach was inappropriate in the case of copper, because, in part, the copper criteria are applicable at time scales of just one hour (acute) and four days (chronic) and "must be applied in the area of the discharge," where complete mixing of saltwater and freshwater could not be presumed. *Id.* at 117-18. EPA then calculated that average tidal flow at the discharge would be only 6 cfs—which could increase the copper limit by, at most, 1.5 µg/l (monthly avg.)—but explained that even this flow figure would be inappropriate to factor into the calculations, because no tidal component at all would exist at certain tidal stages and that, even during other stages, complete

[16] In the Petition, Taunton incorrectly states that the copper limit is based on a dilution factor of 3.4. *Pet*. at 39. Taunton requested that the Region re-evaluate the 7Q10 using data through 2012, which the Region did, and which resulted in a calculated dilution factor of 3.6 and copper limits of 8 µg/l and 16 µg/l in the Final Permit. *RTC* at 20-21.

mixing of the freshwater with any saltwater could not be presumed due to stratification and the much shorter applicable time periods during which this "very small" component of ocean flow might occur at this upstream location. *Id.*

Taunton fails to overcome its burden to demonstrate that the copper limits are based on a finding of fact that is clearly erroneous. 40 C.F.R. § 124.19(a)(4). Petitioner neglects to set forth any "factual support" for the basic premise upon which its "reasons" are based, *id.* § 124.19(a)(4)(i), and instead merely asserts that the Board should accept it as fact, *Pet.* at 40 ("First, the tidal flow is already mixed with the freshwater flow at the point of discharge."). But this is insufficient to garner review. EPA cogently explained why there would be no saltwater dilution at some times, and why at other times complete mixing could not be presumed, *RTC* at 117-18, a reasonable and conservative approach EPA is authorized to make in a reasonable potential analysis.

E. Wastewater Effluent Flow Limit

Petitioner objects to the Permit's effluent flow limitation of 8.4 MGD in its Permit, arguing that "flow" is not a pollutant, and that EPA lacks the authority to regulate it under the Act. *Pet*. at 42. This issue has been waived. In its comments on the Draft Permit, Taunton objected to the flow limitation *only* insofar as it was used to derive the Permit's mass limitations. Taunton indicated that it was in the process of evaluating a future flow increase request, but nowhere questioned EPA's legal authority to the impose permit conditions regulating the quantity of wastewater effluent discharges from the WWTP.[17] *RTC* at 13. Review of this issue should be denied. *Town of Concord*, NPDES Appeal No. 13-08, slip op. at 32-33

[17] Taunton eventually submitted a letter to the Region contesting its legal authority to impose wastewater effluent flow limitations, *Pet.* at Att. 25, but these comments were untimely, filed more than eighteen months after the comment period.

(EAB Aug. 28, 2014) (denying review of the petitioner's challenge to EPA's legal authority to impose a flow limitation on the grounds that it was not preserved and declining review of the merits).

F. Interim TN Limit

Petitioner objects to the Permit's interim monthly average TN limit of 5 mg/l. Petitioner contends that the limit is as stringent as the final seasonal average TN limit of 3 mg/l. *Pet*. at 37.

EPA's establishment of the interim TN limit was reasonable and supported by the Administrative Record. The Petitioner does not argue that the interim limit cannot be met; instead, it proceeds on the incorrect assumption that the interim limit is more stringent than the final limit.

While some wastewater treatment facilities that are meeting 5.0 mg/l on a monthly average basis will be able to also meet 3.0 mg/l on a seasonal average basis, most will not be able to. Of the ten treatment facilities cited in the RTC, at 9, only three report a monthly average TN concentration of approximately 5.0 mg/l (Branford, Milford, and Waterbury) and none of the three meets 3.0 mg/l on a seasonal average basis. Of the ten, the average difference between the monthly average and the seasonal average is approximately 1.1 mg/l and only one had a difference of greater than 2.0 mg/l, supporting the conclusion that for most treatment facilities, a 5.0 mg/l monthly average limit is not more stringent than a 3.0 mg/l seasonal average limit. More importantly, the data cited support EPA's conclusion that a Bardenpho plant, which is what Petitioner has proposed to build, *Petr*. *Att.* 38, is capable of meeting a 5.0 mg/l monthly average limit as demonstrated by three of the five plants utilizing a Bardenpho process. Despite not being required to meet a 5.0 mg/l monthly average limit in the permit, the other two plants utilizing a Bardenpho process are achieving 5.1 mg/l and 5.4 mg/l on a monthly average basis.

Pursuant to 40 C.F.R. § 122.47(a)(1), a compliance schedule must lead "to compliance with the CWA and regulations…as soon as possible." EPA's decision to fashion an interim limit that can be achieved with Petitioner's chosen technology, and to not forestall reasonable progress toward the overall nitrogen reductions EPA determined would be necessary to comply with Section 301(b)(1)(C) of the Act and implementing regulations, is in keeping with this provision.

G. Flow-Tiered WQBELS

Petitioner has failed to demonstrate any ground for review, merely restating its comments on the Draft Permit, where it claimed that the Permit's WQBELs should be relaxed under wet weather conditions on the theory that "under high flow conditions [] the wastewater facility has basically no meaningful impact on ambient water quality" as a result of dilution, *RTC* at 31, and that WQBELs based on critical low flow conditions are not "necessary" within the meaning of Section 301(b)(1)(C). EPA concluded this argument lacked merit. Petitioner's assertion that the discharge from the WWTP would comply with Massachusetts WQS under a bifurcated dry/wet-weather regime was simple conjecture not accompanied by any facts or analysis. *Id*. at 33. Contrary to this conjecture, EPA pointed out that wet weather POTW loadings indeed had a meaningful impact on water quality (30% of the total TN load based on 2006 data), and more specifically cited to nutrient-related water quality impairments that were occurring under these high flow conditions. EPA also cited to a 1996 letter from EPA to Gary Stenhouse, of Rochester, New Hampshire, discussing considerations relating to permit limits based on seasonal flows, which included the requirement to comply with critical low flow requirements under state WQS. 314 CMR 4.03 (3) (NPDES permit limits for discharges to rivers and streams must be calculated to meet standards at the 7Q10). *Id.*

Petitioner does not meaningfully confront EPA's response, and opts instead to rephrase its generic allegations during the public comment period, asserting that WQBELs calculated

assuming 7Q10 conditions are "on [their] face" unnecessary because additional flow in the Taunton River during wet weather conditions will result in additional dilution under "non-drought conditions." *Pet.* at 41-42. This not only ignores EPA's analysis regarding the significance of POTW loads and WQS exceedances during wet weather, but fails to explain how its approach complies with 314 CMR 4.03(3). *City of Attleboro*, slip op. at 58 (rejecting permittee's argument that EPA should have taken into account dilution of its discharges in the river at high flows).

Petitioner also raises for the first time EPA's 1999 Combined Sewer Overflows: Guidance for Monitoring and Modeling, a reference that was clearly available during the public comment period, but is in any case unconvincing. *Pet.* at 41-42. This generic quotation, of course, cannot upend EPA's site-specific assessment of Petitioner's discharge on the receiving waters during weather.

Petitioner additionally points to language in the Stenhouse letter indicating that flow-based or flow-tiered limits are permissible in theory—EPA does not disagree—but that only begs the question of whether they are permissible under the circumstances here and applicable provisions of Massachusetts WQS, which they are not.

In the end, Petitioner retreats to a technological feasibility argument—"the City cannot possibly meet the daily maximum limits when operating under high flow," *Pet*. at 42—but Section 301(b)(1)(C) does not make any exceptions for technological feasibility. *Blackstone*, 690 F.3d at 33.

H. *Iowa League of Cities*

Taunton invites the Board to consider the Eighth Circuit decision in *Iowa League of Cities*, 711 F.3d 844 (8th Cir. 2013) to render an overall merits decision on "EPA's position with

regard to blending." *Pet*. at 43. The *Iowa* decision, binding precedent in the 8th Circuit, addressed in part how EPA may exercise its authority under the CWA to determine whether a particular diversion at a POTW constituted a bypass under 40 C.F.R. §122.41(m). *Id.* at 877. The court concluded that EPA could not make this determination by applying secondary treatment limitations to internal treatment processes. *Id.* at 877-88.

While the Board is empowered to review a "contested permit condition or other specific challenge to the permit decision," 40 C.F.R. § 124.19(a)(4), Petitioner does not base its request for review on any aspect of Region 1's permit decision, but on comments (termed by Petitioner an "EPA announcement") submitted by EPA Region 2 on a permit issued by the State of New Jersey Department of Environmental Protection. *Pet*. at 43. Petitioner appears to regard that entirely unrelated permit as a convenient opportunity to further litigate the merits of the *Iowa* decision, but the permit review process "is not an open forum for consideration of every …aspect of a proposed project." *Knauf Fiber Glass, GmbH*, 8 E.A.D. 121, 127 (EAB 1999). Rather, in a proceeding under § 124.19, the Board's role is to evaluate EPA's compliance, in issuing the NPDES permit *on appeal*, with the federal CWA and implementing regulations. Moreover, the Board's authority does not extend to appeals of state-issued permits under the NPDES provisions of the Clean Water Act. *Town of Seabrook, N.H.*, 4 E.A.D. 806, 817 (EAB 1993) (concerns pertaining to a state-issued permit are not subject to NPDES permit review by the Board). To opine on such matters would be merely advisory, a practice the Board avoids in light of its jurisdictional limits. *Cf. Cavenham Forest Indus., Inc.*, 5 E.A.D. 722, 731 n.15 (EAB 1995) (declining to provide advisory opinion on speculative issue). For all the foregoing reasons, and for the more obvious fact that the legal arguments regarding blending could have been raised but were not, *Iowa League* having been decided well prior to the public comment period, and indeed

having been *cited* by Petitioner in its comments for an unrelated issue, *RTC* at 41, review of this issue should be denied.

I. Co-Permittee Requirements

Finally, Taunton asserts that, "under the language of the permit, it could be held jointly and severally liable for the actions of [the co-permittees, the Towns of] Raynham and Dighton," and that it was clear error for EPA not to amend the Final Permit in response to comments by Taunton. *Pet.* at 43.

Taunton's specific objection to the language in the Permit was not brought to the Region's attention during the public comment period and is not preserved. In its comments on the Draft, Taunton objected to language regarding the reporting of sanitary sewer overflows ("SSOs"), noting that Taunton should "not be responsible for reporting SSOs that occur outside its municipal boundary and legal jurisdiction." *RTC* at 30. EPA responded: "EPA agrees that under the Permit language it is the satellite collection system operator that i[s] responsible for reporting of SSOs from the satellite collection system. The City of Taunton is responsible only for reporting SSOs that occur within its jurisdiction and/or from its system (although this would include interceptors owned by the City that extend into other communities, if any)." *RTC* at 31. Inclusion of the Towns as co-permittees does not impose any responsibility or liability upon the City for the terms and conditions required to be met by the co-permittees, nor are these responsible Town authorities liable for the City's actions under the permit. In addition to EPA's response, the language of the permit itself is clear on its face. Ex.A (Final Permit) at 1. ("The Towns of Raynham and Dighton are co-permittees for PART 1.B. UNAUTHORIZED DISCHARGES and PART 1.C. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM, which include conditions regarding the operation and maintenance of the collection

systems *owned and operated by the Towns*. *The responsible Town authorities are:* [Raynham and Dighton].") (emphasis added). It is not error for EPA not to have changed the Final Permit language in response to Taunton's comment. Moreover, EPA reaffirms its consistent reading of the Permit, which is, Taunton's assertions notwithstanding, binding. *Charles River Pollution Control Dist.*, NPDES Appeal No. 14-01, slip op. at 22-23 (EAB Feb. 4, 2015).

IV. CONCLUSION

The Board should deny review of the Permit.

Respectfully submitted,

_____
Samir Bukhari
Michael Curley

STATEMENT OF COMPLIANCE WITH WORD LIMITATIONS

I hereby certify that the Region's Response to the Petition for Review in the matter of City of Taunton Wastewater Treatment Plant, NPDES Appeal No. 15-08, contains less than 14,000 words in accordance with 40 C.F.R. § 124.19(d)(3).

Dated: June 12, 2015

Respectfully submitted,

_____

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CERTIFICATION OF IDENTICAL PAPER FILING

I certify that the enclosed Response to the Petition for Review, and exhibits thereto, are identical copies of those filed electronically in this matter by EPA Region 1 with the Environmental Appeals Board on June 12, 2015.

Dated: June 12, 2015

Respectfully submitted,

_____

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CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing Response to the Petition for Review, in the matter of City of Taunton Wastewater Treatment Plant, NPDES Appeal No. 15-08, was served on the following persons in the manner indicated:

By Electronic Filing and Overnight Mail:

Ms. Eurika Durr
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Dated: June 12, 2015

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Samir Bukhari